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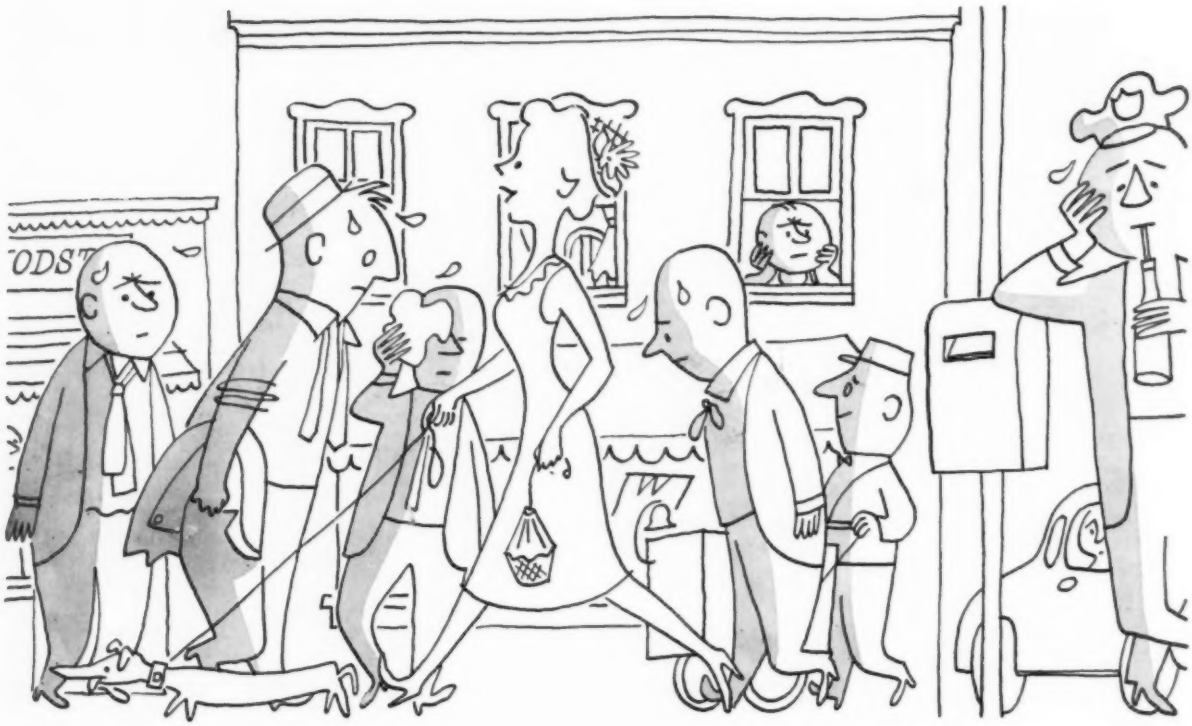
Drug and Cosmetic Industry

AUGUST 1953

When she makes it a rule to look cool



Norda helps

Women are smart in the summer. They are ladies of quality. They find relief from summer sultriness in quality toiletries.

Fine cologne is a summer stand-by. It picks up and perks up her spirits. Even on the most drooping days, cologne keeps her "fresh at four."

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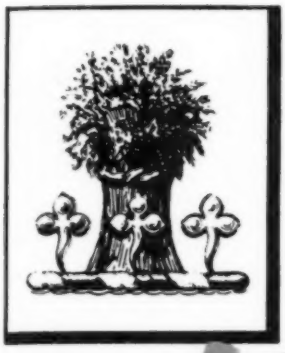

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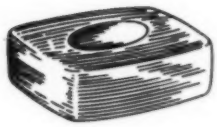
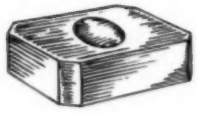
Private brand soaps that are worthy of your name



Toilet

Deodorant

Shaving



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DRUG & COSMETIC INDUSTRY

AUGUST, 1953

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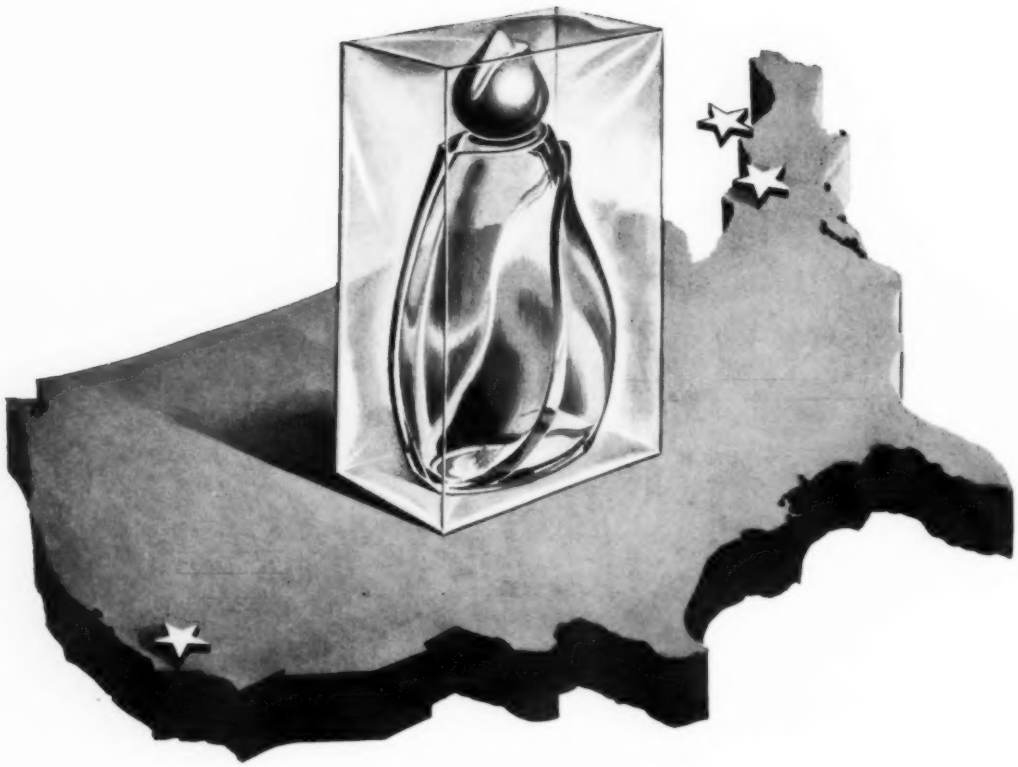

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THE LABOR RELATIONS WORK *of the* T. G. A.

EVERY SEASON of the year seems to be the season for discussion of Labor relations problems. However, more such discussions, friendly and otherwise, seem to take place in mid-summer. Perhaps it's the heat or the humidity. Human cussedness always seems to be at its best—or worst—during the month of August.

WHICH REMINDS US of the Labor Relations Service of your Association. Your officers, directors and staff have always been acutely aware of the problems which, in the nature of things, must arise between employer and employee. In a modest way we have always done our best to make the cosmetic industry a fine one in which to work. We have tried in a quiet way to improve working conditions and hours of employment, and to stimulate the payment of wage scales just a shade better than those existing in the average industry. We have not been crusaders but we have tried to be forward looking and constructive.

FOR THE LAST SEVERAL YEARS, we have had on our staff one of the best labor relations experts in the country. John Patterson Currie's council and advice to the Association and to individual members as well has contributed markedly to the cause of better employer-employee relationships in the industry as a whole and in many cases. This service, excepting in cases where Labor relations Council is called upon to perform individual services of a time-consuming nature, is paid for from Association funds and comes to each member as one of his regular privileges of membership. Every member is free to, and should, take the fullest advantage of it.

THE ASSOCIATION annually makes a detailed survey of wages, working conditions and employee benefits existing in the industry from Coast to Coast. The report of this survey is in the hands of active members in mid-summer. It has been widely accepted by employee groups and by Government authority, as well as by industry members, as an authoritative and accurate summary of labor conditions in the industry. The job classifications worked out by the Association for this survey have been accepted by industry, employee groups and Government as the standard for the toilet goods industry, and the findings in each annual survey have done much to avoid long and costly disputes as to prevailing rates and conditions, which often are so troublesome in industries not having such a service.

THIS IS A SERVICE available to every member of the TGA. It is another example of the many services which are, perhaps, of even greater value to the "little fellow" than to the "big fellow".

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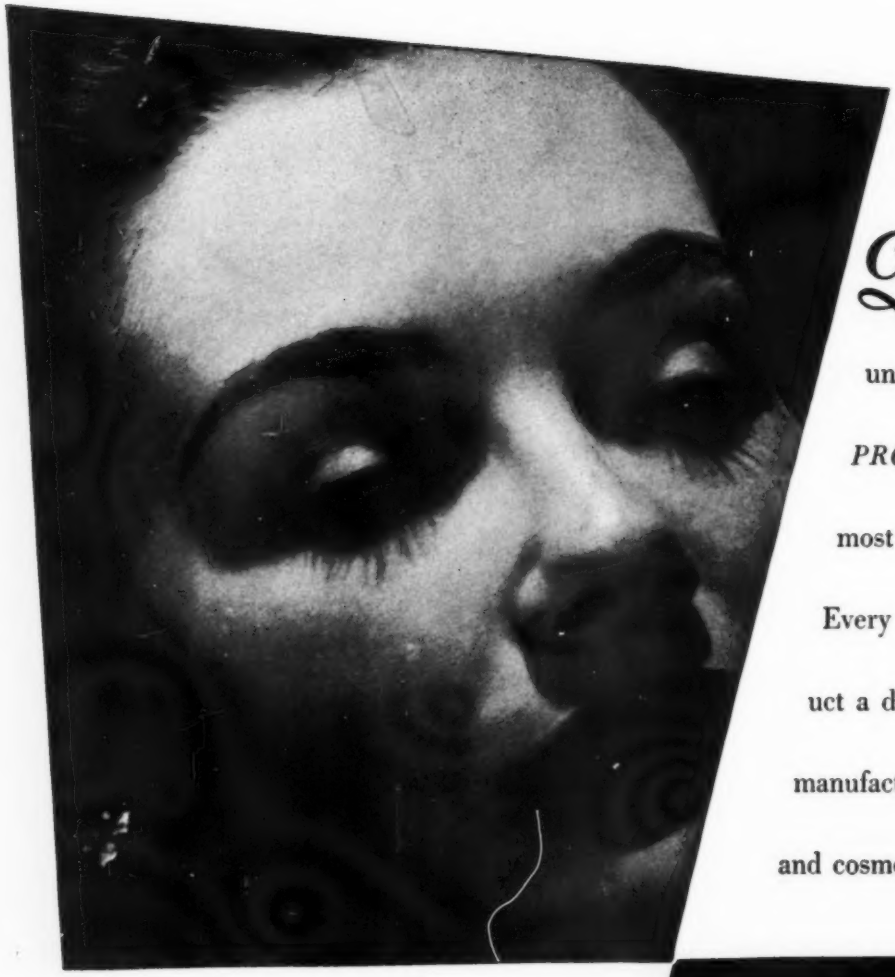

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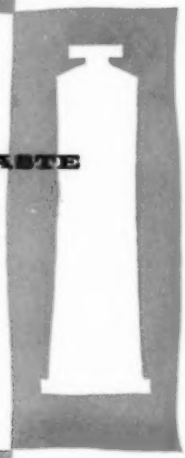

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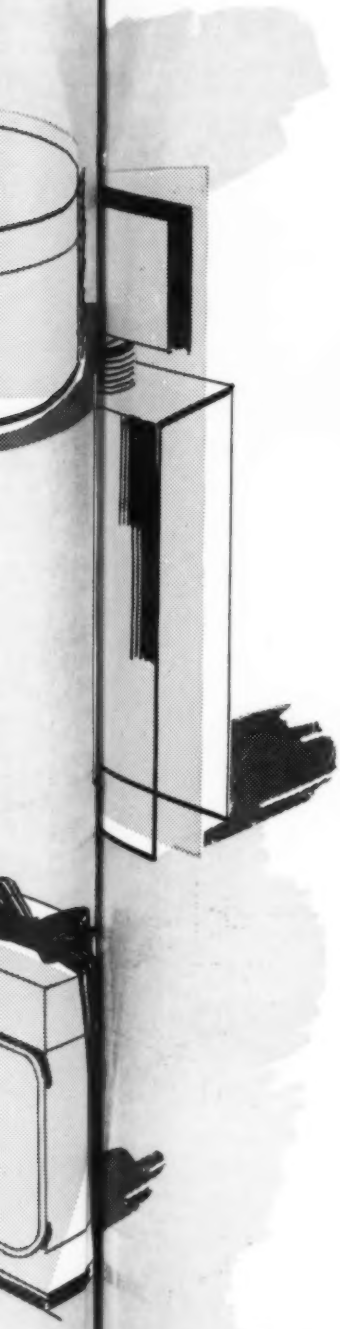

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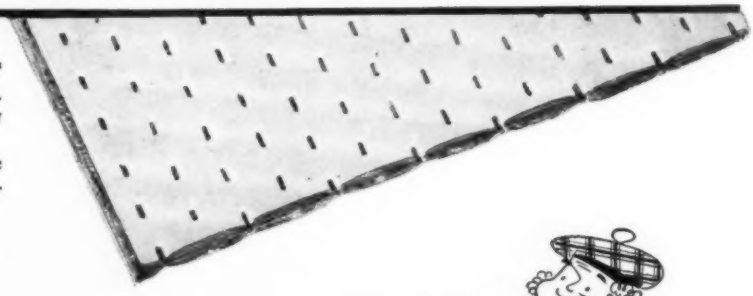

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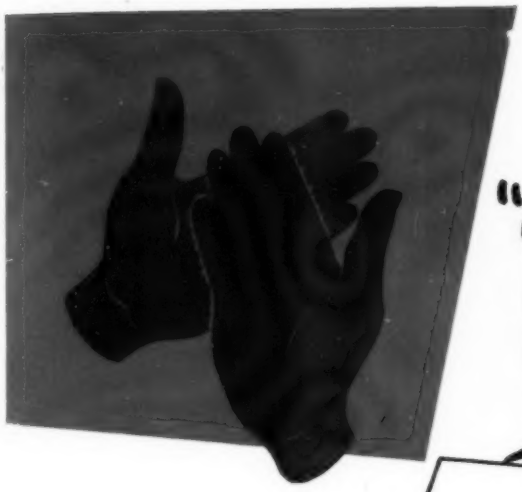

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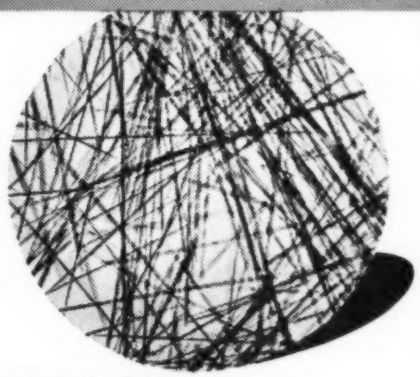

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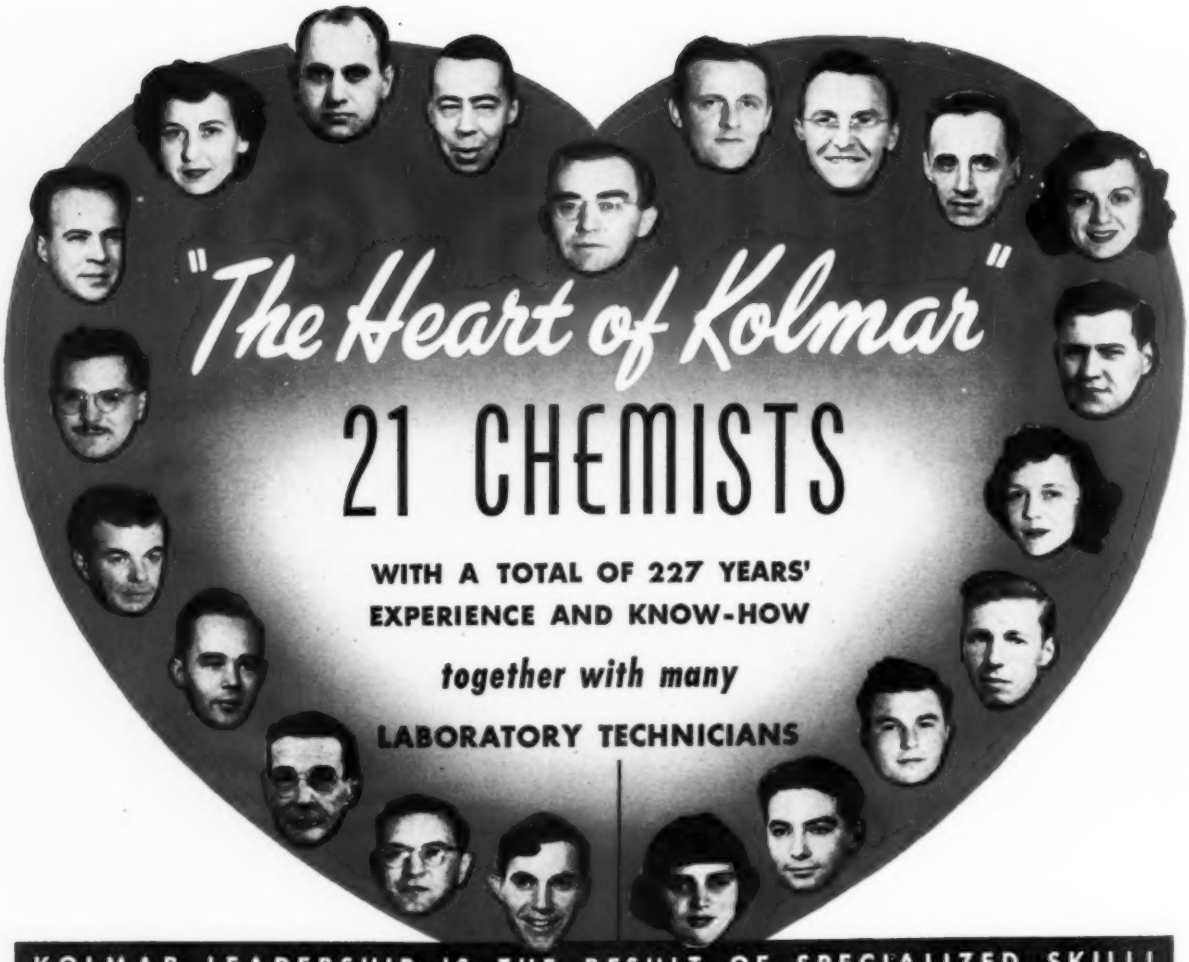

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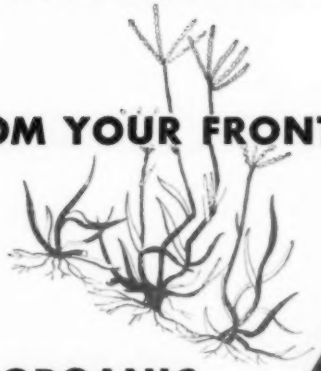

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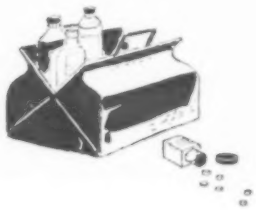

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1. Products of unvarying highest quality, rigidly adhering to your formula, due to analytic quality controls of raw materials, of manufacturing processes, and of packaged end products.

2. Lowest possible unit costs resulting from large quantity purchasing, full use of automatic and semi-automatic equipment, and multiple-product production line scheduling.

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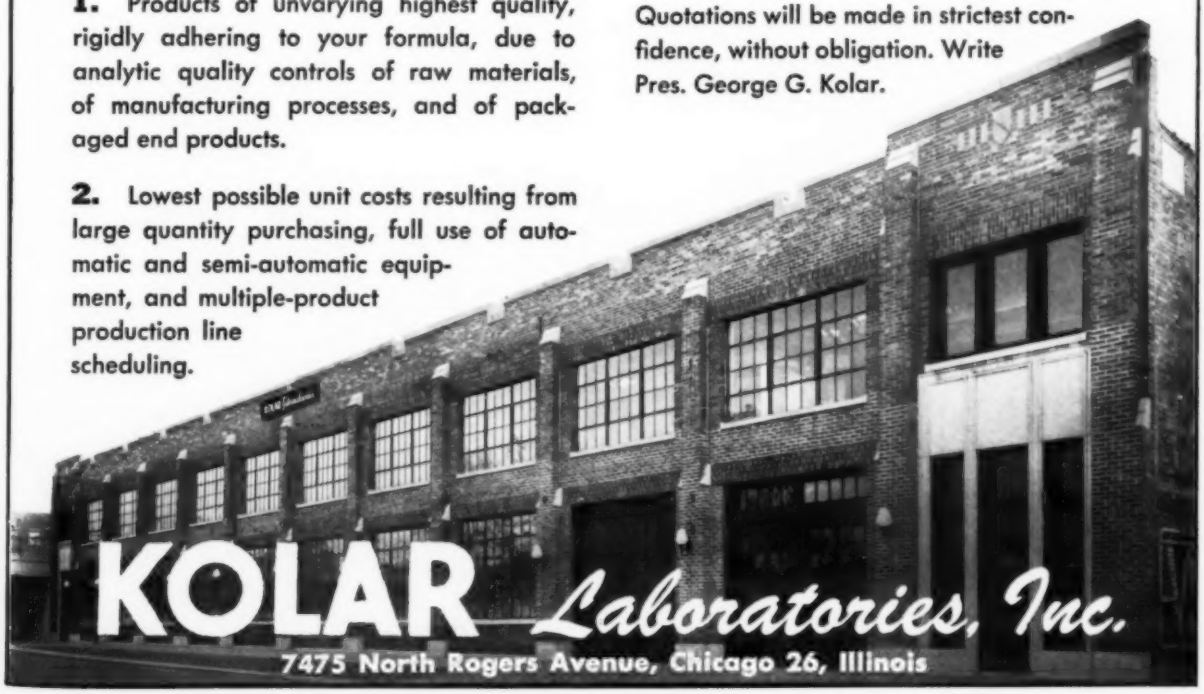
Quotations will be made in strictest confidence, without obligation. Write Pres. George G. Kolar.



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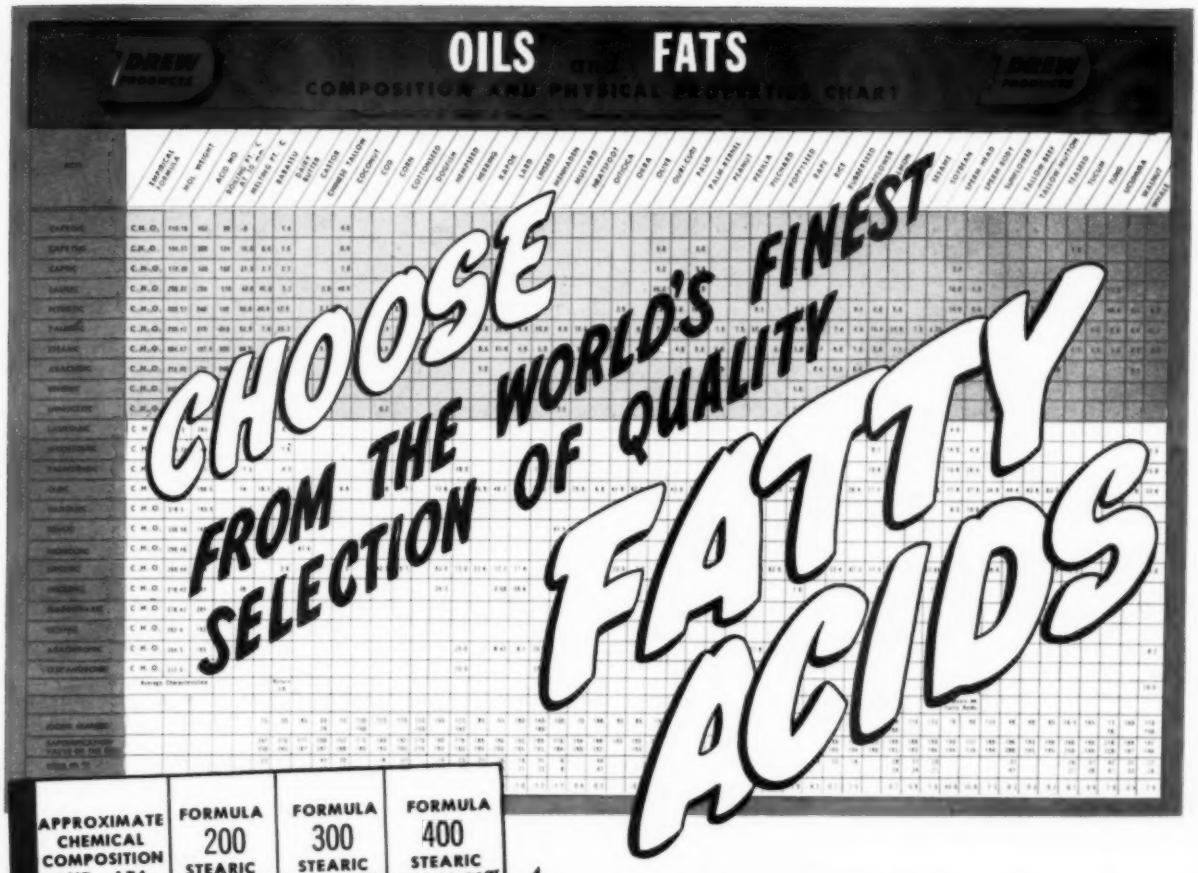

APPROXIMATE CHEMICAL COMPOSITION AND ATA	FORMULA 200 STEARIC ACID 65%	FORMULA 300 STEARIC ACID 70%	FORMULA 400 STEARIC ACID 85-90%
MYRISTIC	6.0%	6.0%	6.0%
PALMITIC	20.0%	21.0%	6.0%
STEARIC	70.0%	70.0%	85.0%
OLEIC	4.0%	3.0%	3.0%
FFA	99-103	99-103	99-103
TITRE°C.	56-57	58 Min.	60-64
IODINE VAL.	6 Max.	4 Max.	3 Max.
ACID VAL.	196-204	196-204	196-204
SAP. VAL.	196-204	196-204	196-204
COLOR	4.0/1.0	4.0/1.0	4.0/1.0

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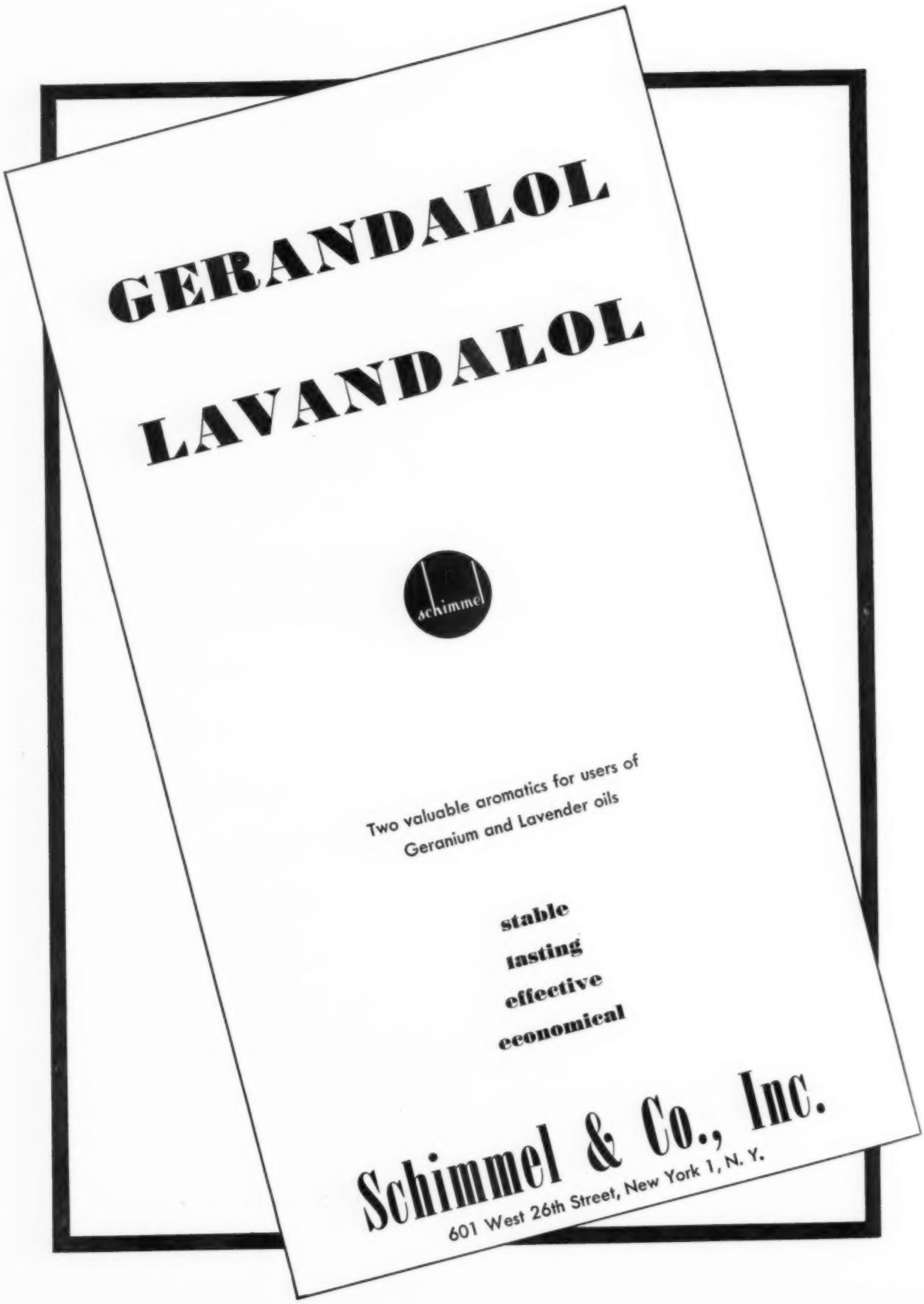
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Cloud Point	35°-43°F.
Color Lovibond 5¼" Red	1-2
Color Lovibond 5¼" Yellow	8-12
Color Gardner 1933	3 max.
Unsaponifiable	1.0% max.
Saponification Value	199-203
Acid Value	198-202
% F.F.A. as Oleic Acid	99.5-101.5
Iodine Value (WIJS)	95 max.
Refractive Index 50°C. (Average)	1.4500

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. . . another original contribution to
the reviving interest in floral odors

— TURN THE PAGE

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by **ALBERT VERLEY & COMPANY**

. . . a companion odor to our new Mimosa Fleur Extra, offering you equally interesting possibilities for new, original effects.

Following the extended vogue of blended exotic compositions, it is natural to expect a revival of interest in floral types.

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Pois de Senteur Extra has been created as a new Sweet Pea odor worthy of this opportunity. Like our new Mimosa Fleur Extra, it offers a means of utilizing an appealing note which has had very little exploitation. Investigate its application to your products.

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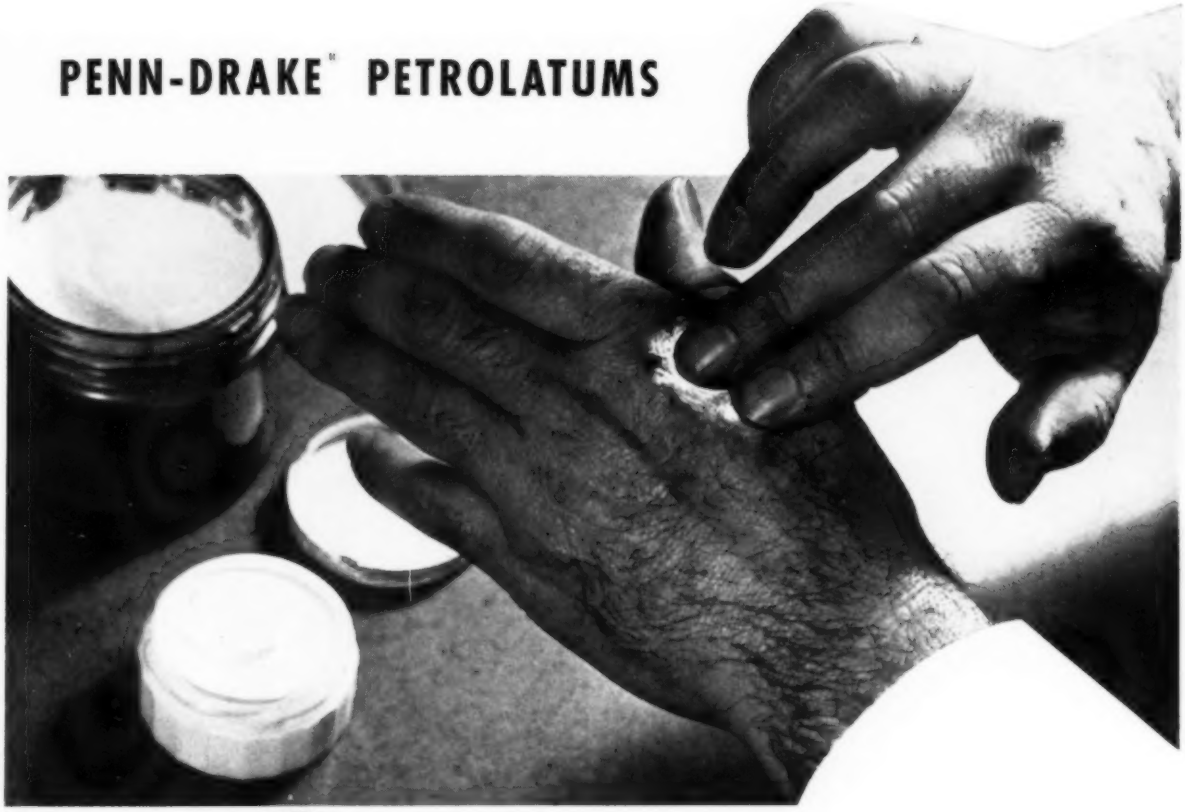

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Penn-Drake Petrolatums are carefully refined from 100% pure Pennsylvania crude stocks. They are free from odor, taste, rancidity and impurities which may cause deterioration with age. They are stable in every respect and are supplied in all grades and colors from Super White to Dark Green. We will be glad to send you samples of standard grades, and can provide special grades if your product requires them.

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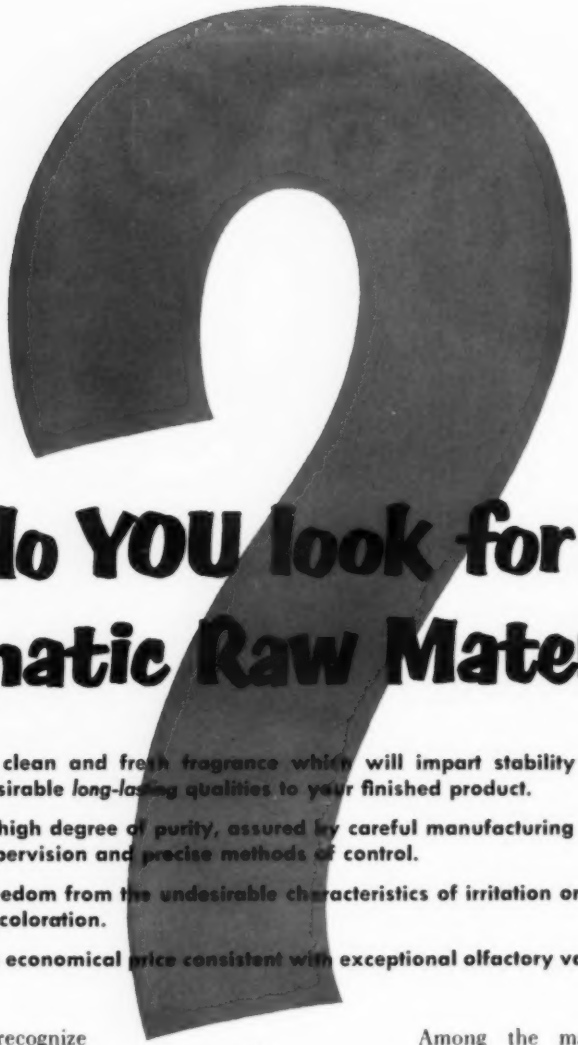
1878 1953 75TH ANNIVERSARY PENN-DRAKE PRODUCTS



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- **Freedom from the undesirable characteristics of irritation or discoloration.**
- **An economical price consistent with exceptional olfactory value.**

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AROMATICS DIVISION
VERONA CHEMICAL COMPANY

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Nothing takes the place of Glycerine

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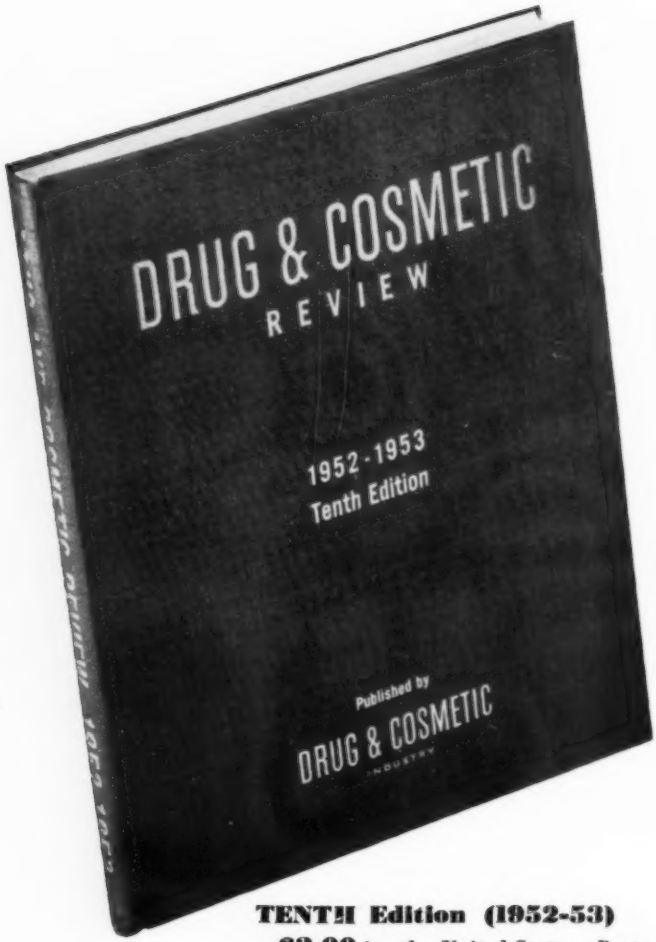

1—Who Sells It
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3—Formulas
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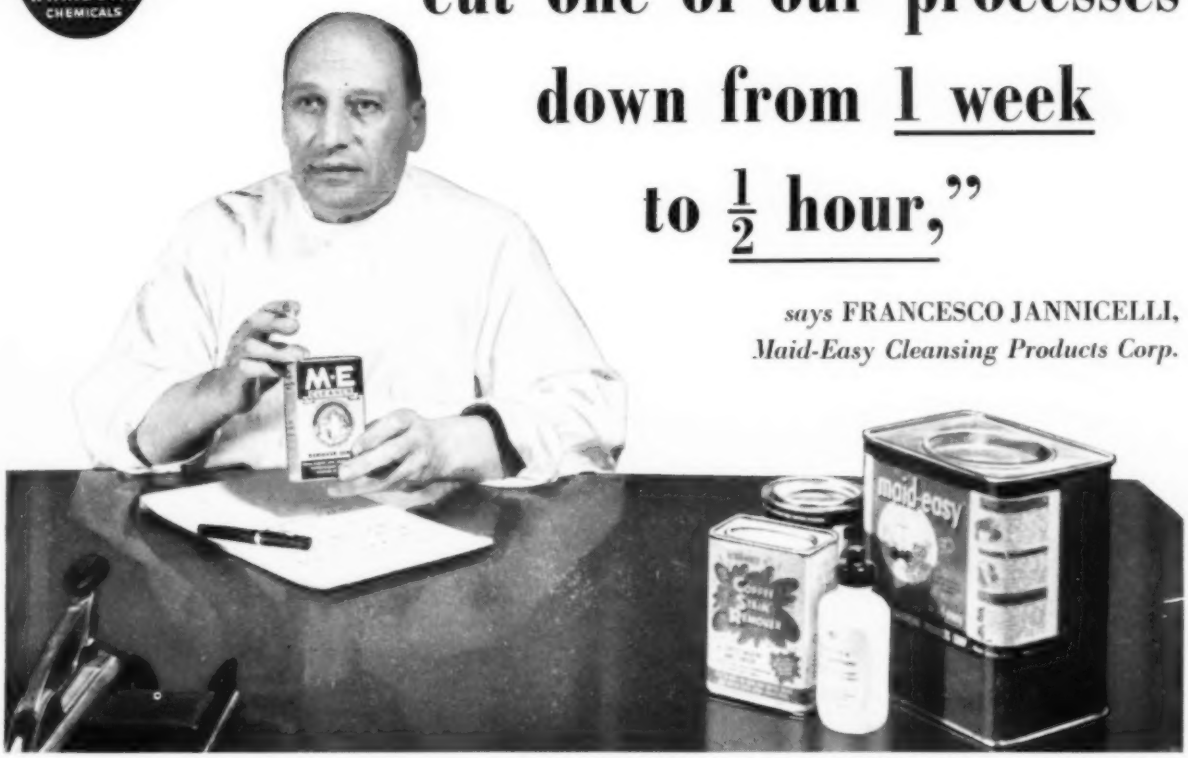
says FRANCESCO JANNICELLI,
Maid-Easy Cleansing Products Corp.



Francesco Jannicelli, president of Maid-Easy Cleansing Products Corp.

"I noticed an announcement on your PLURONIC F68, stating that it was the only 100% active agent nonionic surface-active agent in flake form. We arranged for samples for possible uses in conjunction with our quaternaries.

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"In our Regina Skin Conditioner, for example, the use of PLURONIC F68 has actually cut the processing time down from 1 week to ½ hour, with a greatly improved end result. . . . This product, developed by Wyandotte, opens up a whole new field for chemists."

Have you evaluated the possibility of using Wyandotte's new and different Pluronics* in your products? Pluronics are available, in commercial quantities, in both liquid and flake form. We have compiled considerable information on many applications. Our knowledge is increasing constantly.

Write to our Development Department stating your specific problem so that we can pass on to you any helpful information which we may have on the application of Pluronics — or mail coupon below for samples or booklet.

*REG. U.S. PAT. OFF.

Wyandotte CHEMICALS

Development Department, Wyandotte Chemicals Corp., Wyandotte, Mich.

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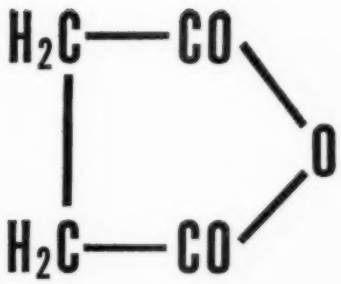

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Magnesium Trisilicate

Foremost American Producer

Mallinckrodt, one of the first American producers of pharmaceutical grades of magnesium trisilicate, began manufacturing this valuable antacid in 1937 and is today among the foremost domestic producers.

Dependably Uniform

Of special value to pharmaceutical manufacturers is the high degree of lot-to-lot uniformity of Mallinckrodt magnesium trisilicate, not only in chemical composition but also in moisture content, particle size distribution, and bulk. Mallinckrodt magnesium trisilicate fully meets U.S.P. requirements.

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To fit both tableting and suspension needs Mallinckrodt magnesium trisilicate is supplied in the following forms:

Magnesium Trisilicate U.S.P. Powder
Magnesium Trisilicate U.S.P. Bulky
Magnesium Trisilicate U.S.P. Super Bulky

Important Properties

Important Properties—Typical Values

	Powder	Bulky	Super Bulky
Bulk—Approx. fl. oz./lb. . . .	45	75	130
Approx. Particle Size Distribution*			
less than 5 microns	15%	50%	65%
5-10 microns	10%	30%	15%
10-20 microns	35%	10%	15%
20-40 microns	40%	10%	5%
*Determined by sedimentation methods.			
Adsorptive power—	not less	not less	about 150
mg. methylene blue/gram . . .	than 100	than 200	
Acid consuming capacity—			
cc. N/10 HCl/gram	140-160	140-160	140-160

Companion Products

For alkaline mixtures containing magnesium trisilicate, Mallinckrodt also supplies top-quality companion products such as Magnesium Carbonate U.S.P., Calcium Carbonate U.S.P. and Bismuth Subcarbonate U.S.P.

Samples and prices will be supplied on request. For technical information write for Magnesium Trisilicate Data Unit X-212.

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"He's vice-president in charge of rebates on price cuts."

Keeping Posted

New "Push Money" Rule

The Federal Trade Commission has adopted a new trade practice rule covering push money. This has been substituted for the original one in the FTC Code of Fair Trade Practices for the Cosmetic and Toilet Goods Industry. The new rule follows:

It is an unfair trade practice for any industry member to pay or contract to pay anything of value to a sales person employed by a customer of the industry member, as compensation for, or as an inducement to obtain, special or greater effort or service on the part of the sales person in promoting the resale of products supplied by the industry member to the customer——

1. *When* the agreement or understanding under which the payment or payments are made or are to be made is without the knowledge and consent of the sales person's employer;
2. *When* the terms and conditions of the agreement or understanding are such that any benefit to the sales person or customer is dependent on lottery or chance;
3. *When* any provision of the agreement or understanding requires or contemplates practices or a course of conduct unduly and intentionally hampering sales of products of competitors of any industry member;
4. *When*, because of the terms and conditions of the understanding or agreement, including its duration, or the attendant circumstances, the effect may be to substantially lessen competition or tend to create a monopoly; or
5. *When* similar payments are not accorded to sales persons of competing customers on proportionally equal terms in compliance with Section 2 (d) and (e) of the Clayton Act.

Note: Payments made by an industry member to a sales person of a customer under an agreement or understanding that all or any part of such payments is to be transferred by the sales person to the customer, or is to result in a corresponding decrease in the sales person's salary, are not to be considered within the purview of this standard rule, but are to be considered as a subject to the requirements and provisions of Section 2 (a) of the Clayton Act.

Thus the Commission continues to view the payment of "push money" as being legal. And in the case of this new rule goes still further and eliminates the provision under the old rule which required that the customer be informed that the sales person was being paid "push money."

Hist-O-Plus Stipulation

Claims that Hist-O-Plus or any other product of substantially the same composition or possessing substantially the same properties (1) contains any ingredient it does not contain or (2) does not contain ingredients contained in other products when it does contain such ingredients, will *not* be made in advertising under the terms of a stipulation signed by Anahist Company, Yonkers, N. Y., according to the Federal Trade Commission.

Anahist Company also agrees to avoid use of statements which represent that (1) the product has any beneficial effect on colds, or (2) it relieves neuralgic pain or menstrual pain except when such pains are mild.

Dow to Make Glycerine

The Dow Chemical Company has been granted a certificate of necessity for $5,485,000, representing 60 per cent of the value of a plant to be erected at Freeport, Texas, for production of glycerine.

Loans to Manufacturers

During 1952, six drug, pharmaceutical, and cosmetic manufacturers obtained $40,850,000 from life insurance companies and other long-term investing institutions, as compared with $17,880,000 to eight companies in the preceding year, according to E. V. Hale & Company. Eli Lilly & Company obtained the largest loan in this industry through placement of $30,000,000 30-year 3.50 per cent notes with a group of institutions. Warner-Hudnut, Inc. sold $6,000,000 20-year 4.25 per cent notes to two life insurance companies, and Grove Laboratories, Inc., $1,000,000 15-year 3.75 per cent first mortgage bonds to a single institution. A $3,500,000 15-year 3.50 per cent note was placed for Sterling Drug, Inc. with a life insurance company, and its subsidiary, Sydney Ross & Co., obtained $250,000 on a

guaranteed 14-year 3.375 per cent note from the same lender.

Wildroot Obtains Dismissal

Dismissal without prejudice of a complaint against Wildroot Co., Buffalo, N. Y., charging the company with unlawful payment of advertising and other allowances, is announced by the Federal Trade Commission. The dismissal was made by a three to two vote of the members of the Commission. Commission Chairman Edward F. Howrey wrote the majority opinion and this was concurred in by Commissioners Lowell B. Mason and Albert A. Carretta. Commissioners James M. Mead and Stephen J. Spingarn dissented.

This is the first case in which the Federal Trade Commission has accepted a voluntary settlement in an action under the Robinson-Patman Act. The announced policy of the Commission, heretofore, has been that it is under compulsion not to accept voluntary settlements in these proceedings.

In its motion for dismissal of the complaint, Wildroot listed four grounds: (1) that the matters and practices complained of are adequately covered by the Trade Practice Rules for the Cosmetic and Toilet Goods Industry; (2) that it has subscribed to such rules, is now in compliance therewith, and intends to continue to comply; (3) that no useful purpose can be served by further prosecution of the action in that every result possible to be obtained has already been obtained; and (4) that all practices charged in the complaint have long since been abondoned.

After pointing out that there is no reason to doubt Wildroot's sincerety in its declaration that it has already ceased and will permanently refrain from use of the practices complained of, Chairman Howrey stated that the sole question involved seemed to be whether "it is in the public interest to continue the proceedings for the purpose of imposing upon the respondent a cease and desist order requiring it to discontinue practices which it has already stopped and which it does not intend to resume." He also pointed out that the Hearing Examiner believed the motion to dismiss should have been granted for lack of public interest, but that the examiner felt compelled to deny the motion because of the Commission's policy against settlement of Clayton Act cases by trade practices procedure.

Fair Trade Decisions

The U. S. Circuit Court of Appeals recently upheld the District Court injunction granted Eli Lilly & Company against Schwegmann Brothers Supermarket in New Orleans prohibiting the retailer from selling Lilly goods at less than fair trade minimums. The majority opinion held that "we find nothing in the Louisiana Fair Trade Act or the Federal Act itself defeating or violative of the Constitution of the United States." The Court cited the Old Dearborne decision of the U. S. Supreme Court as controlling in the Schwegmann case. The case is being appealed to the U. S. Supreme Court by Schwegmann for final adjudication.

On the other side of fair trade, a Superior Court decision in New Jersey decided against the manufacturer—the Lionel Corporation—in favor of the price-cutting retailer—Gray-Robinson Stores, Inc., operator of the S. Klein department store chain. Naturally this decision is being appealed to a higher New Jersey Court.

About the same time as the Lionel case was decided adversely to advocates of fair trade, another Superior Court decision granted an injunction to General Electric Company restraining J. M. Goodwin, Inc. from selling GE products below fair trade minimums.

Order Against Liepe Claims

Claims in advertising that its various products, used singly or in combination, constitute a competent or effective treatment for, or will cure, varicose ulcers, or any leg trouble, ailment or disorder due to varicose conditions, have been ordered discontinued by A. C. Liepe Pharmacy, Milwaukee, according to the Federal Trade Commission. Products named in the order include Liepe Cleansing Oil, Liepe Bland Oil, Liepe Dusting Powder Soothing, Liepe Dusting Powder Protective, Liepe Special Ointment No. 1, Liepe Special Ointment No. 2, and Liepe Special Bandage, as well as any product of substantially similar properties.

Respondent must also cease advertising that the products, singly or in combination:

1. Promote better circulation, prevent ulcer formation, eliminate discharge, completely relieve all pain and distress, relieve swelling in excess of preventing swelling while the bandage is applied, prevent any infection other than surface infection, aid healing other than by providing an antiseptic protective covering for the affected area, or relieve pain, itching or burning in excess of providing relief while the prescribed preparations are on the affected area, in cases of varicose ulcers, leg sores, open legs, discharging wounds, inflamed areas around a vein, eczema or any leg trouble, ailment or disorder due to a varicose condition;
2. Cures eczema or has any beneficial effect upon its underlying causes.
3. Have any beneficial effect in cases of eczema in excess of relieving itching and burning while the prescribed preparations are on the affected area.

Machine Dispensing Pays Tax

The Treasury Department has ruled that the dispensing of a perfume through a coin-operated slot machine by inserting a coin therein is a sale at retail and is therefore subject to the 20 per cent cosmetic tax. The ruling states that the owner of the dispensing machine is the retailer and is liable for reporting and paying the tax.

Walker Hair Claims Banned

The Federal Trade Commission has issued an order prohibiting Mme. C. J. Walker Manufacturing Co., Indianapolis, from representing that any of their products (1) will improve the health of the scalp, or (2) will be of any therapeutic value in relieving conditions of short, thin, or brittle hair, or (3) prevent hair from falling. Also prohibited are claims (1) that any of their preparations are a competent or effective treatment for dandruff or tetter, or an itching scalp in excess

of temporarily relieving itching or dissolving loose dandruff flakes so that they may be removed, and (2) that use of any of the preparations accompanied by massage of the temple areas or otherwise, will stop hair from falling out or make hair soft and silky with long-lasting texture and luster.

Rayette Products Stipulation

Advertising claims that Rayette GDT Dandruff Lotion With Creme Oil (1) leaves the hair or scalp free from bacteria or (2) insures the health of the hair or scalp, are discontinued under a stipulation signed by Rayette, Inc., St. Paul, Minn, according to the Federal Trade Commission. Rayette also specifically agrees to stop advertising:

(1) that Rayette GDT Dandruff Lotion or Rayette Dandruff Lotion With Creme Oil causes the hair or scalp to be free of dandruff or dandruff flakes;

(2) That either of these preparations (a) is effective in preventing conditions which cause itchy scalp or (b) has any effect on itching scalp, except to afford relief from such itching when due to dandruff or minor scalp irritations;

(3) That the combined use of Rayette GDT Lotion, Rayette GDT Dandruff Lotion With Creme Oil, Rayette GDT Hair Conditioner and Rayette GDT Shampoo corrects dry hair or dandruff;

(4) That Rayette GDT Hair Conditioner (a) corrects excessive oily scalp, dandruff scales, over-waved hair, over-bleached hair or harsh dyed hair or (b) leaves the hair or scalp healthy;

(5) That Rayette GDT Hair Conditioner corrects dry or itchy scalp, porous dry hair or dry or brittle hair ends:

(6) That Rayette GDT Hair Conditioner (a) contains nature's restorative oil or (b) restores the natural oil to the hair.

The stipulation provides, however, that nothing in the agreement prohibits representations (1) that Rayette GDT Dandruff Lotion or Rayette Dandruff Lotion With Creme Oil relieves the scalp and hair of dandruff scales and flakes; (2) that Rayette GDT Dandruff Lotion, Rayette GDT Dandruff Lotion With Creme Oil, Rayette GDT Hair Conditioner and Rayette GDT Shampoo, when used in combination, relieves dry hair or dandruff; (3) that Rayette GDT Hair Conditioner relieves dry or itchy scalp, porous dry hair or dry or brittle ends; and (4) that Rayette GDT Hair Conditioner supplies lanolin, a natural oil, to the hair, so long as such is the fact.

Chexit Claims Stopped

Representations that Chexit (1) is an effective treatment for, or has any beneficial effect on, diarrhea or scours in livestock or (2) is a demulcent or tonic, are banned under a stipulation signed by Dick C. Simpson, trading as United Farmers Exchange and Chexit Sales Co., Council Bluffs, Ia., according to the Federal Trade Commission. Respondent also agrees to cease representing (1) that the product is "guaranteed" unless the nature and extent of the guarantee and manner in which the guarantor will perform thereunder are clearly and conspicuously disclosed; (2) by use of words or phrases "anti-acid," "to neutralize stomach acidity," or otherwise, that the animals for which this product is offered are subject to hyperacidity which condition would be relieved by use of the product, and (3) by use of the term "United Farmers Exchange" or in any other manner, that the business is other than an individual proprietorship conducted for profit.

Malaria and Tropical Diseases

"Malaria remains the biggest medical and economic problem in the world today," said Dr. Eugene H. Payne of Parke, Davis & Company recently upon his return from a 38,000-mile, six-month survey of progress in tropical medicine. "Malaria causes more sickness and death than any other disease," he said. "Every year, approximately 350 million people suffer from malaria—and at least three and a half million die."

Dr. Payne explained that control measures reduce malaria, but seldom eradicate it. "History shows," he pointed out, "that malaria is capable of breaking through all controls, with resulting epidemics." This, he went on to say, may be due to climatic change, or to the appearance of a new vector—an insect that carries microorganisms from a sick prson to somebody else. The new vector is immune to the control measures, because of different breeding and biting habits. New malaria epidemics, he said, sometimes occur in areas where controls—such as insecticides, screening, oiling and DDT—had almost eliminated the disease. More deaths often result there than before the use of controls. "Following years of protection from malaria, a person's partial immunity seems to drop below the safety point," he explained.

Having visited 30 different research centers and conferred with several hundred scientists during his tour, Dr. Payne told of one remote area which had been noted for its malaria control. The disease appeared to be cleaned up, but within a few months, an epidemic of "almost unbelievable proportions" broke out.

"It will never be known how many died during that epidemic," Dr. Payne said. "In November and December of last year and January of this year, there was unusual rainfall, with unusual winds. Humidity, which determines the life of insecticide spray, was high. The higher the humidity, the less time the spray remains effective. Thus, in this instance, unusual climatic conditions were responsible for the epidemic."

He said suppressive drugs are still an integral part of any control program—and are vital in halting an epidemic break-through.

Another tremendous medical and economic problem, according to Dr. Payne, is amebiasis—commonly Known as amebic dysentery. "There is still no satisfactory answer to this problem," he explained. Amebiasis is spreading into new areas, despite all improvements made in sanitation." A new drug, he declared, is needed to clean up "carriers" and should have these four characteristics: It must be cheap enough for mass treatment. It must be fully effective. The treatment period should be short. And the drug should be safe even in unskilled hands.

"The rise and fall of tropical diseases throughout the world is not fully understood," he said. "It is

true that modern methods of sanitation and preventive medicines have played a great part in controlling and eradicating certain tropical diseases. But often, the disease has of itself died out. Why? We don't know. But some day we will."

Georgia Fair Trade Appeal

The Georgia decision in the fair trade case brought by Oneida, Ltd., makers of community silverware has been appealed to the U. S. Supreme Court. The decision by the Supreme Court of Georgia held that the Georgia Fair Trade Act was illegal when applied against non-signers because it was enacted prior to the Miller-Tydings and McGuire federal enabling acts and had not been re-enacted after these acts were enacted. In this first case brought to the U. S. Supreme Court since the McGuire Act was enacted, the question of the constitutionality of the McGuire Act is not at issue. Rather is the U. S. Supreme Court being asked to rule on the legality of a state fair trade act with respect to non-signers which the U. S. Supreme Court in the Schwegmann decision might have intended to invalidate, but which the McGuire Act was meant to have validated.

The Oneida suit was brought against Gray-Robinson Stores, Inc., Atlanta, for violation of the non-signer clause of the Georgia Fair Trade Act. A trial court ruled in favor of Oneida, but this was reversed by the Georgia Supreme Court which held that since the state did not re-enact the fair trade act after passage of the federal enabling laws, it was null and void. The court also added a brief statement to the effect that the fair trade act offended the due process clause of the constitution of the State of Georgia.

In its appeal, Oneida argues that Congress was "aware of the then existing state fair trade acts" when it passed the Miller-Tydings and McGuire Acts, and it did so "to help effectuate the public policies of the states that already had fair trade laws and of the states which might enact such laws in the future.

"The judgment of the Supreme Court of Georgia not only deprives petitioner of the protection for its trade-mark and goodwill . . . but also throws doubt on the fair trade acts of the numerous other states which have seen fit to enact such legislation and whose local policies Congress has sought to effectuate."

It certainly does seem peculiar that Congress would pass a law such as the Miller-Tydings Act or the McGuire Act if no state laws were in existence when it was enacted.

Colgate Sues on Chlorophyll Patent

Colgate-Palmolive-Peet Company is suing in the Federal District Court in New York's southern district to have the Gruskin chlorophyll patent declared invalid. Colgate had originally sued for cancellation of this patent at the time they came out with their chlorophyll tooth paste. At that time, the Rystan Company, Mount Vernon, N. Y., owners of the patent, has given an exclusive license for a definite period of time to Lever Brothers for their Chlorodent Tooth Paste marketed by the Pepsodent Division of the company. However, Rystan made an arrangement with Lever Brothers whereby the exclusiveness of the license was invalidated and Colgate was then licensed. Colgate has notified Rystan that they are cancelling the license agreement.

Colgate charges that all information pertinent to the Gruskin patent—which was granted in 1938 and therefore, will expire in 1955—had been disclosed long before the late Benjamin Gruskin, of Philadelphia, was granted the patent.

Another suit brought by the Block Drug Company, makers of Amm-i-dent tooth paste, last year, is still pending in the courts. This suit was filed about April of last year at the time when the original Colgate suit was filed.

When Cigarettes Are Drugs

In our issue of April, 1952, page 462, we published a piece which told of Fairfax cigarettes, made by the Sterling Tobacco Corporation of New York. These cigarettes, in addition to containing chlorophyll, also contained triethylene glycol as a humectant, and upon this humectant were based all sorts of medical claims. Inhaling the vapor of this humectant, as one would when smoking the cigarette, would prevent a long list of diseases including the common cold, influenza, pneumonia, sinusitis, tonsilitis, scarlet fever, measles, whooping cough, meningitis, tuberculosis, mumps, middle ear infection, and parrot fever.

Last month U. S. Federal Court Judge Thomas F. Meaney upheld in Newark, N. J., a seizure of 46 cartons of Fairfax cigarettes by the Food and Drug Administration in an action claiming that these cigarettes were drugs within the meaning of the definition contained in the Federal Food, Drug, and Cosmetic Act.

Counsel for Sterling Tobacco Corporation argued that the U. S. Circuit Court of Appeals, New York, had held in the Chesterfield case that tobacco was not a drug under the Federal Trade Commission Act, and that this precluded the Food and Drug Administration from bringing a charge under the Federal Food, Drug, and Cosmetic Act.

"The clear import of the leaflet is at least that the smoking of the cigarettes will make it less likely that the smoker will contract colds or other virus infections," Judge Meany opined. "This is enough to bring the product within the statutory meaning of 'drug.' If claimant wishes to reap the reward of such claims, let him bear the responsibility as Congress sees fit to impose it."

FDA counsel answered the claim of similarity to the Chesterfield case by saying that the circumstances differed. In the Chesterfield case, he pointed out, the representations were negative in nature, while the Fairfax representations are positive.

New Castor Oil Use

An important new use has been developed for castor oil. Castor Oil Products, Inc., of Yonkers, N. Y., uses 100 per cent degummed castor oil to make what it calls Trizol, a carbon and gum remover for cars and airplanes. Natural castor oil has unusual wetting ability, adhering easily to all metal surfaces, but it does not mix with mineral oils, leaves a gummy residue and decomposes under continuous service, forming harmful acids. The distillation of the natural oil,

making it free of gum, a patented process to which the Yonkers firm holds all rights, is said to be of considerable use not only as a gum remover but as an upper cylinder lubricant, a crankcase additive, and for other purposes.

Proprietary A'ssn Wins in N. J.

The State Board of Pharmacy of New Jersey was overruled late last month by the decision of Superior Court Judge Frederic C. Colie who described the Board's official definition of medicines as "unreasonable." The decision lifted the ban in New Jersey on of non-prescription drugs except in drug stores. Items affected include aspirin, headache powders, boric acid and vitamins.

This is the case which was brought by the Proprietary Association in an effort to obtain a proper court ruling on the terms "patent and proprietary medicine," in the State of New Jersey, after the State Board of Pharmacy had filed suit under the New Jersey Pharmacy Act to stop stores from selling non-poisonous packaged medicines unless a registered pharmacist supervised the sale.

The decision ended a long and expensive battle which involved eleven days of hearings without a jury. In the hearings, which ended December 19, the State Board of Pharmacy argued that the State Pharmacy Act limited the sales in question to pharmacist-supervised drug stores. The board contended that the restriction was a proper one to guard against potential danger in misuse of packaged drugs.

Judge Colie ruled that the board's three-part drug and medicine definitions bore "no reasonable relation to public health, safety and welfare." The definitions include all articles listed in the U. S. P. and N. F. The board offered testimony to show the danger of misusing packaged drugs. The court noted, however, that death or bodily harm "may result form excessive doses regardless of whether the sale be by or under supervision of a pharmacist or by an untrained clerk."

The decision, if upheld by the higher courts of New Jersey, will open the way for marketing of these packaged drugs and medicines in chains, supermarkets, and other retail outlets.

Further, if the Proprietary Association is successful in New Jersey in opening these other retail outlets for the selling of these products, they might bring similar suits in other states where the New Jersey restrictions prevail.

In his decision Judge Colie said:

"Numerous witnesses testified to instances where pharmacists had, in isolated instances, warned customers of the potential dangers inherent in the use of some packaged medicines and of other incidents when pharmacists had checked with the attending physicians to verify that it would be wise and proper to sell certain packaged drugs to a given customer. There also was testimony of instances where fatal or near-fatal results had followed upon self-medication with packaged medicines. One instance was of a fatal case where a man had ingested between 75 and 100 grains of aspirin within a three-hour period; another was a fatal result due to boric acid poisoning to an infant of tender years and a similar case of a near-fatal result; yet another of acute ferrous sulphate poisoning involving two infants of 15 to 18 months of age. One infant had taken 15 five-grain tablets, the other, 15 or 20, each within a brief period. In these cases the infants had ingested the tablets, unbeknownst to the mother, and in the home. These cases are demonstrative of the fact that poisoning may result from excessive dosage regardless of whether or not the sale be by or under the supervision of a pharmacist, or by an untrained sales clerk. It is noteworthy that the ferrous sulphate cases resulted from ingestion of tablets that were subscribed by a physician. All the evidence points unerringly to the fact that, once the medicine has come into the hands of the consumer, no supervision of sales will guard against the misuse thereof. * * *

"The regulation of the Board of Pharmacy defining 'drug' and medicine in the following language:

" '(1) articles recognized in the official United States Pharmacopoeia, official Homeopathic Pharmacopoeia of the United States, or official National Formulary, or and supplement to any of them; and (2) articles intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals; and (3) articles (other than food) intended to affect the structure or any function of the body of man or other animals; and (4) articles intended for use as a component of any article specified in clauses (1) ,(2), or (3); but does not include devices or their components, parts, or accessories.'

"is declared to be unreasonable on the ground, and for the reasons hereinabove stated, that it bears no reasonable relation to the public health, safety and welfare."

X-Ray for Can Fill

General Electric Company has developed for the brewing industry an x-ray device that watches the filled cans of beer and ale as they pass by on the filling line. Any can that is found too short in content is blown off the line with an air blast. The margin that will actuate the mechanism is a mere thirty drops.

Research Expenditures

Schering Corporation tops other drug companies in percentage of research expenditures listed last month in Barron's Weekly. Schering's percentage of sales invested in research in 1952 stood at 9.3, compared with 5.3 per cent for Merck & Co., 4.7 per cent for both Pfizer and Smith, Kline & French Laboratories. However, Merck led in actual cash outlay for research of $5,566,000, compared with $5,000,000 for Pfizer, $2,197,000 for Smith, Kline & French, and $1,751,000 for Schering.

Chemical companies listed were du Pont with an outlay of $52,000,000 for a percentage of 3.2; Union Carbide & Carbon, $30,000,000 and 3.1 per cent; American Cyanamid Company, $18,844, and 5.1 per cent; Allied Chemical & Dye Corporation, $13,000,000, and 2.7 per cent; The Dow Chemical Company, $11,400,000, and 2.8 per cent; Monsanto Chemical Company, $8,852,000 and 3.3 per cent; and Hercules Powder Company, $6,394,000 and 3.5 per cent.

EWING GALLOWAY PHOTO

Pharmacists at the Crossroads

by Frazer V. Sinclair

In retailing, where sharp evolutionary changes are taking place, the retail druggist is up against more problems than any other kind of retailer. No wonder his leaders, his best friends and his would-be advisors are offering so many different remedies and so much conflicting advice.

In addition to the basic changes which are bringing turmoil and uncertainties to all retailing—that is the conflict between personal selling and customer self-service, between centralized location and dispersed location, as in suburban areas and shopping centers, and other changes, the retail druggist has his own particular problem in regard to his professional status.

In this country the retail druggist has had to establish a balance between mercantilism and professionalism, often strained to the limits of incredulous incompatibility, in order to maintain a retail distribution system adequate for medicine.

It could be that problems arising out of this compromise between mercantilism and professionalism will pose more serious problems for the druggist than the problems universal to retailing, such as self-service. It could be that the present preoccupation of the retail druggist with the problems of all retailing, such as self-service, is not to his interest as a professional man endowed with a favored status as a retailer.

Retail druggists have had a span of at least ten good years. Part of this prosperity has come from rising population and consumer purchasing power, part from the dynamic growth of pharmaceutic manufacturers, where the retail druggist has a monopolistic place in distribution.

These dynamic years have made great changes in the manufacturing industry. The way in which the pharmaceutical manufacturer thinks today is as new and different, as compared to twenty or even ten years ago as are the products they now produce, compared to those of ten or twenty years ago. There is a vigor and a purpose diffused throughout the manufacturing industry that is sadly lacking in the industry's retail trade.

It must be a matter of very serious concern to the retail druggist to contemplate the possibility that the research and the vigor and the vision now being displayed in the manufacturing industry may lead the pharmaceutical manufacturers into paths of distribution that will make retail pharmacy of decreasing interest and importance to them.

This is no idle speculation. Pharmaceutical manufacturers, like chemical manufacturers, are thinking in ever broader terms in research and marketing. The chemical industry today is also the plastic industry, the synthetic fiber industry, the broad and growing field of agricultural chemicals. It impinges increasingly on medicine.

In the same way, the pharmaceutical manufacturer is increasingly taking a leading place in nutrition, in animal health and in plant health. Right now, and to a rapidly increasing extent, leading pharmaceutical manufacturers no longer find the druggist adequate for distribution of all their products.

What this may mean to the druggist is a difficult and hazardous decision, in a retail world with plenty of problems of its own.

At this time, most of the advice and leadership offered to the druggist seems to be along the lines of general retail competition. The menace of grocery store competition in low priced, pre-sold home necessities seems to outweigh any other present consideration of survival and of vigorous growth.

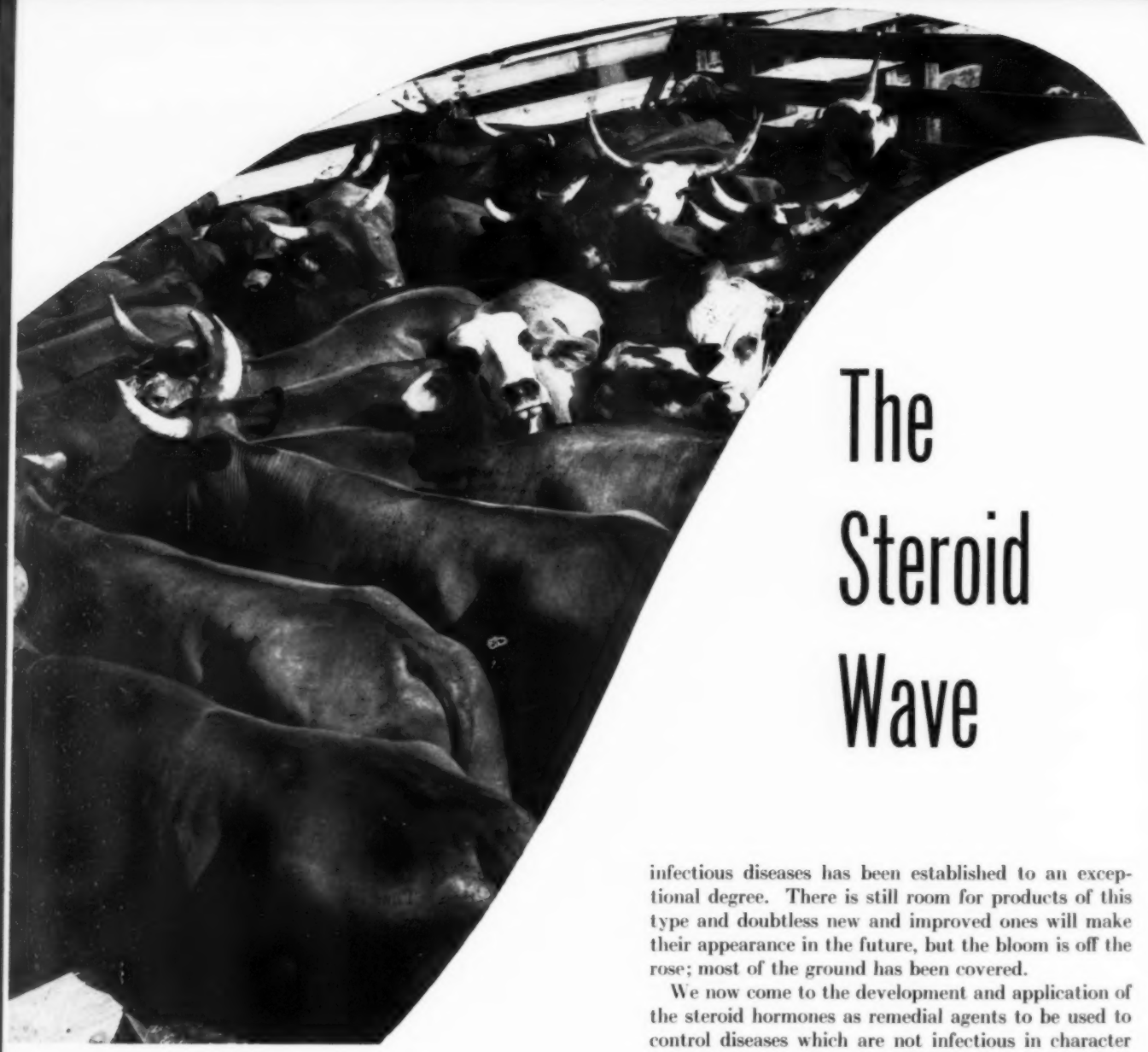
Such things as rent and payroll force this attitude on many retail druggists. Declining sales in toiletries, tobacco, candy, magazines and other pick-up utility packaged products, traditional in the drugstore, make immediate problems that have to be met now.

At the same time retail pharmacy as a whole and the more sucessful pharmacists in particular cannot afford to ignore great evolutionary changes, some of which are working in their favor, some diametrically opposed.

Retail selling of low-priced, pre-sold consumer packaged goods such as toiletries, candies, tobacco, etc., has already undergone fundamental changes because of fundamental social and shopping habit changes. The consumer does not care where she buys these pre-sold packaged utility products, does no shopping for them, wants only convenience. Open display, accessibility, self-service and exposure to large traffic is the inevitable answer to retailing these products. Today the grocery supermarket has the unquestioned advantage. Tomorrow it may be the automatic vending machine.

The retail druggist who plans to fight in this field must be a merchandiser first and always. As the battle for products which the consumer casually picks up anywhere wages hotter, it would seem that professionalism and any advantages or opportunities it may offer must retreat further and further into the background. As the merchant becomes predominant, as he must in this competitive field, the professional man must shrink into the background. And, as part of these changes, as the retail store is changed and adopted to this kind of selling and management, professional service must also be subordinated.

(Continued on Page 256)



BLACK STAR PHOTO

The Steroid Wave

Medical progress seems to come in waves. A new product is discovered, similar products generally representing improvements upon the original one are developed, and the application of this particular type of product reaches its peak. After that, interest in this category of products subsides and things lie relatively dormant until a new type of product brings about a new wave of interest.

The largest wave to date has been the antibiotics. But so far as one can tell, this category of drug products seems to have reached its peak. This followed the sulfonamide wave, and between them the control of infectious diseases has been established to an exceptional degree. There is still room for products of this type and doubtless new and improved ones will make their appearance in the future, but the bloom is off the rose; most of the ground has been covered.

We now come to the development and application of the steroid hormones as remedial agents to be used to control diseases which are not infectious in character and which present serious challenges to the medical profession. In fact Dr. Charles Huggins, the University of Chicago physician who has controlled cancer of the breast by removing the adrenal glands, has stated that he believes the answer to cancer lies in the steroid hormones. One chemical manufacturer, he said, has 500 crystalline steroid compounds, but they have not been tested. With reference to cancer and the steroid hormones, it is said that there originally was hope that cortisone containing carbon 14 might have a beneficial effect in cancer cases, but this did not prove to be the fact.

The list of diseases being successfully treated with cortisone, hydrocortisone, and ACTH is quite long and continues to grow. In fact these drugs are producing results in instances where their use appears to be quite unrational to the average physician. The study of the mechanism by which cortisone produces its results, now made possible by the production of cortisone with carbon 14, should explain the reasons

for cortisone's effectiveness in the various conditions in which it is used. This should furnish real clues to the conditions in which cortisone should be of benefit, and it should also help in informing drug research men as to what other types of steroid hormones might be desirable to investigate.

The feeling exists in many quarters that so far as the steroid hormones and their use in medicine are concerned, the surface has hardly been scratched. Because of the complicated chemical structure of these products, because of their profound effect upon the the body chemistry, and because of the serious effects which might occur from their misuse, the original synthesis of these drugs, the clinical investigation of them, and the production of the promising ones on a large scale consumes very large sums of time and money. It is true that since the initial attempt to synthesize cortisone much has been learned, but one cannot predict with certainty that this will aid much in attempts to produce other steroids.

For these reasons, at the moment no one can tell just how long it will be before this new wave in drug therapy comes to full flower. It may be within the almost immediate future or it may be ten or more years from now. But one can rest assured that as much time and money as are necessary will be spent to investigate these products to the fullest extent in order to establish them as a most important part of the doctor's therapeutic weapons with which to fight disease.

The results obtained with these drugs are sometimes quite fascinating. Through their ability to prevent tissue damage, they are many times effective in infectious conditions, thus replacing germicides or antiseptics to some degree. As is the case with any new drug or group of drugs, enthusiasts foresee practically every disease controlled by the steroid hormones. However, although great things might be accomplished through the use of these products, and although great strides might be made in the control of seroius diseases not now controllable, limitations will eventually be established regarding their use and effectiveness.

The manufacturers in the ethical drug branch of the industry, as well as some chemical manufacturers who supply this industry, are "declaring themselves in" on the development and probable marketing of the class of products known as steroid hormones. From a time, not so long ago, when only two manufacturers worked around the clock to develop and produce the two products in that class which were then known to be effective for rheumatoid arthritis, we now find every manufacturer worth his salt is working feverishly to gain a foothold in this category of drug products. Since the time when Merck was overcoming almost insurmountable difficulties in the way of complicated synthesis, production facilities, and supplies of raw materials, for the production of cortisone, and when Armour Laboratories faced great difficulties in the production of ACTH, numerous manufacturers have expended much time, effort, and money to secure positions which will insure them basic positions in this class of products.

Schering Corporation declared itself in by development of a synthesis of cortisone. Upjohn Company declared in by development of a method for cortisone production based mainly on the use of fermentation. Chas. Pfizer & Co. has come in through an operating agreement with Syntex of Mexico, a company which had threatened serious competition for all United States manufacturers. G. D. Searle & Co. has long been conducting extensive research in these products and will doubtless wind up in a favorable position. Monsanto Chemical Company has long had rather definite plans to engage in the manufacture of this class of products, and we note that Charles E. Frosst & Company, Montreal, Canada, has its eye on this important development.

Frosst was a contributor to the production of cortisone and hydrocortisone atomically labeled with carbon 14 which is now available free of charge to investigators who wish to study their mode of action, according to an announcement by the National Institutes of Health, Sloan-Kettering Institute, and the Worcester Foundation for Experimental Biology. Says the announcement:

"The Upjohn Company, Kalamazoo, Michigan, carried out two essential reactions, a mold fermentation and a chemical step in the elaborate cortisone synthesis. The Worcester Foundation for Experimental Biology, Shrewsbury, Mass. untilizing radioactive progesterone prepared by the Frosst Company, biosynthesized the hydrocortisone by dissolving radioactive progesterone in blood and passing it through functioning adrenal glands of beef after these have been removed from the animal. The U. S. Atomic Energy Commission provided the radioactive carbon with which these hormones were 'tagged.'

"The availability of long-lived radioactive cortisone and radioactive hydrocortisone will make possible the detailed study of their mechanism. This should result in their more effective application in the treatment of arthritis, cancer and other metabolic diseases.

"Both radioactive substances are labeled at position 4 with carbon 14.

"The preparation of these hormones was guided by a committee composed of Drs. T. F. Gallagher and Gregory Pincus of the Worcester Foundation, and Max Tishler of Merck & Co., the Endocrinology Study Section, Dr. Charles B. Huggins, chairman, and Dr. Sam R. Hall, executive secretary, has administered the program.

"Essential technical knowledge and chemical intermediates were provided by members of the committee and others, notably Drs. Arthur Odell, formerly of Frosst; Carl Djerassi of Wayne University; H. G. Kolloff, R. H. Levin and D. H. Peterson of Upjohn; Harold Levy of Worcester Foundation; and George Rosenkranz of Syntex, S. A., Mexico."

The reason for the intense interest in the steroid

(*Continued on page 256*)

The Aging Skin

by Milton A. Lesser

COURTESY HARRIET HUBBARD AYER

In these days, when there is so much talk about geriatric medicine, increasing attention is being given to the dermatologic and cosmetic requirements of older people. More and more it is being realized that skin care in the aged must be considered in any plans concerned with this growing segment of our population.

Geriatric products, designed for the prevention and treatment of diseases of old age, are assuming greater importance with each passing year. It is now clearly recognized that the maturing population will spend more money on drugs and pharmaceuticals. Of related significance is the fact that the medical care of the aged is now attracting the attention of an increasing number of physicians. Thus, the nation now has about 500 specialists in the field of geriatrics, as compared with only about 100 geriatricians a decade ago.[1]

An important function of the geriatrician is to promote self-respect and self-confidence in his patients; both of these factors being essential to successful old age. Personal appearance is, of course, an important factor in attaining the desired results. Hence, skin care and the treatment of skin diseases have a definite place in geriatrics. Data which show that women predominate in the older groups also point to the fact that certain types of cosmetics have important roles in the care of the aging skin.[2]

The increasing interest in older people is due to the realization that this group now comprises a much larger proportion of the nation's population than it did at the turn of the century. Thus, according to information gathered by the Committee on Aging and Geriatrics of the Federal Security Agency,[3] since 1900 the population of the United States has doubled, but the number of persons 45 to 64 years has tripled, while the number of people 65 years and older has quadrupled. As of 1952, there were 13 million men and women of 65 years of age and over and this number is increasing at the rate of about 400,000 per year.

Moreover, as remarked by Dutchess,[4] Americans who become 65 will still have an expectancy of 13 more years of life. Not only have these people been given added years of life, but equally important, they have been given better health. Dutchess feels that today's 65-year-old man or woman probably has greater vigor, greater stamina and better health than the 50-year-old of 1900.

This authority also notes that in 1900 only 18 per cent of the population was 45 years of age or older. Today, 40 million persons in this country, or one out of four, are in this age group. Looking to the future, Klumpp[5] observes that in less than 30 years, we may expect to have at least 66 million persons who are 45 and over and 24 million 65 and over.

The influence of this group on medical and economic

thinking and planning is already apparent. Dermatologists are giving more attention to the aging skin and drug and cosmetic producers are formulating more products to meet its special requirements.

Various investigations, such as the histological studies of Hill and Montgomery,[6] point to the growing interest in the changes caused by age in the skin. Although there is much to be learned concerning the causes of these changes, the effects of age on the skin are becoming increasingly familiar.[7,8,9] As the years pass, the subcutaneous fat is decreased, the skin becomes less elastic and thinner, more wrinkles develop, and the color may become grayish or yellowish, with perhaps pigmented and depigmented areas.[10]

As noted by Palmer,[11] pigment metabolism is less flexible in the aging skin. In many areas there is a localization of pigment accumulation; resulting in the brown spots of the aged, sometimes called senile freckles or lentigines. These develop chiefly in parts of the skin that have been most exposed to the sun and wind, as on the face and upper surfaces of the hands.

She also points out that the general atrophy of the aging skin includes a dimunition in the size and activity of the cutaneous appendages. The sweat and oil glands no longer keep the skin soft and oiled. There is still much keratin formation, but the keratin is not softened by the usual sweat and oil and it is more adherent. For this reason, there are many old people who show greatly thickened, dry, horny nails. In general, the skin is quite dry and scaly, this dryness and scaling being especially prominent in cold weather. Because the general physiology of the skin is also altered, the aging skin is less able to control the body temperature and cutaneous diseases resolve more slowly.

BLACK STAR PHOTO

The hair becomes gray or white. In women an increased growth of hair occurs on the face and body. With men, there is a more or less complete loss of hair on the scalp. Quite often the hair of the ears and nostrils becomes coarser, but it probably does not increase in amount.[12]

Because of these changes, the cleansing of the aging skin requires special consideration. Dryness of the skin is regarded as an especially important consideration with older people. For example, Kennedy and his colleagues[13] believe that the incidence of dryness of the skin is much higher than the statistics will show. Hot baths, strong soap, and wool clothes, they find, are sometimes too much for the skin of a person past 40 years. In treating this condition, they stress the fact that such individuals must take fewer and cooler baths with less soap and substitute a softer material for wool.

Lane and Rockwood[10] also observe that the older skin is drier and that less soap or perhaps a superfatted soap is frequently helpful. Similarly, Palmer[11] remarks that many of the older people with dry skins do well on soap substitutes or a superfatted soap. Likewsie quite indicative are the views expressed by Conley[14] in her discussion of skin care for the older woman. She states that a mild, lightly perfumed white soap and lukewarm water, used as infrequently as consistent with cleanliness and followed by thorough rinsing, is probably the best cleansing method. If this procedure is not satisfactory, cleansing creams and lotions and soap substitutes may be used.

Of particular interest in connection with the use of soaps and synthetic detergents and their so-called drying action, are the recent indicative studies of Johnsen and Kirk.[15] Especially noteworthy is the fact that their subjects consisted of 12 men and 13 women with an average age of 77 years (range 53 to 90 years). These elderly individuals assisted in tests to determine the effect of hand washing with a popular toilet soap and a synthetic detergent bar on the 24-hour sebaceous secretion in an area on the dorsal region of the hand. The experiment with each preparation lasted four weeks.

No statistically significant effect from either the soap or the synthetic detergent on the lipid secretion in this skin region was found. No irritation of the skin was observed in the aged subjects during the eight-week period. Comparison of photographic data failed to indicate any change in the appearance of the skin.

However, as pointed out by Sulzberger and Wolf,[16] in older persons the tendency to dryness is not uncom-

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PHOTO COURTESY HELENA RUBINSTEIN

Ammonium Thioglycolate Systems in Hair Waving

By Wm. R. Keithler

LUCKY HEART LABORATORIES, MEMPHIS, TENN.

The current trend toward home permanents has created many new products as well as many new problems. The thio acid type permanent, being extremely critical during manufacture, necessitates several control tests to ascertain and verify the purity of the product.

The primary consideration is the control of the finished product. First, the pH should be taken immediately upon manufacture of the product, before bottling and packaging. This should run from pH 9.0 to 9.6, preferably in the range of 9.2 to 9.5, inclusive. The color should be checked against a standard for possible change, due to contamination of the product by iron or other catalysts.

A sample should be assayed for thioglycolate concentration by iodimetric titration, or other methods.

Finally, one sample should be stored in an oven at 100°F. to 120°F., and another sample in a refrigerator at 35°F. to 40°F. for 30 days, after which, the pH should once more be checked and the thioglycolate again titrated iodometrically.

Procedure Ammonium Thioglycolate Titration

Titration of ammonium thioglycolate is made on a 1 cubic centimeter sample of the latter, using 1/10 normal iodate solution as a titrating agent. The one cubic centimeter sample of ammonium thioglycolate is treated with about 10 cubic centimeters of dilute sulphuric acid in a small Erlenmeyer flask, to which is also added several cc of soluble starch solution. With a 1/10 iodate solution in a 50 cubic centimeter burette, this titrating agent is slowly added to the material in the Erlenmeyer flask until a permanent blue end-point is reached. The amount of iodate solution used in reaching this end-point is called the titre of thioglycolic acid in the ammonium thioglycolate tested.

To determine the percent of thioglycolic acid in the diluted ammonium thioglycolate in a cold-wave solution, the following equation is used.

Percentage Thioglycolic Acid-Titre X Normality of Iodate X 9.21
Specific Gravity

The titre is obtained by the procedure indicated above, the normality of the iodate is 1/10 normal, the 9.2 has a reference to the molecular weight of thioglycolic acid and the specific gravity will be found on the specifications label, coming with the shipment of ammonium thioglycolate, this value usually averages approximately 1.2.

To determine the titre of the materials shipped from a vendor from the concentration figure given in the specifications of the shipment, multiply this latter figure by the specific gravity and divide the total by 0.921. Thus if the thio has a concentration of 55.5 per cent and the specific gravity is 1.2, multiplying both gives 66.6. This divided by 0.921, gives approximately 72, which would be the titre of the thio in question.

A 5 per cent solution would have a titre of 6 cubic centimeters; therefore, to determine the degree of dilution of vendors thio, if its titre were 72cc this would then be divided by the 6cc for 5 per cent solution, giving a dilution factor of 12. To avoid fractions in calculation, it is best to multiply the 12 by 10, making a total of 120. Dilution would therefore be 110 parts of water and all other ingredients to 10 parts of ammonium thioglycolate. Thus, if 3 parts of 28 per cent aqua ammonia and 2 parts of Cloud are to be used, there would be a remainder of 105 parts to be applied as distilled water out of the original total of 110 parts so that the final formulation would be 105 parts distilled water, 10 parts ammonium thioglycolate and 3 parts 28 per cent aqua ammonia, 2 parts Cloud. This mixture would give a 5 per cent dilution at pH 9.3.

Very frequently raw materials differ from one lot to another, making it almost a necessity to run controls on them also. The following example is cited:

Control Procedure on Ammonium Thioglycolate Received from Vendors

The percentage concentration of vendors sample is noted and recorded. Specific gravity is taken on a sample. A separate sample is titrated with 0.1 N iodate solution and the titre recorded.

The control is checked in the following way:

Known concentration of acid is	— 53.7%
The specific gravity checks out	— 1.2
The normality of the iodate solution is	— .1
A reference to the molecular weight is$_2$	— 9.21
The titre checks out about	— 69.96cc

Equation

$$\text{Percentage of Thio Acid} = \frac{(\text{Titre} \times \text{Normality of Iodate}) \times 921.}{\text{Specific Gravity}}$$

$$53.7\% = \frac{(69.96 \times .1) \times 9.21}{1.2}$$

$$53.7\% = \frac{69.96 \times 9.21}{1.2}$$

$$53.7\% = \frac{64.4316}{1.2}$$

$$53.7\% = 53.694\%$$

If a wetting agent is to be incorporated into the wave lotion, extreme care should be exercised in choosing one. One must choose an agent that will be compatible with the active ingredients at the relatively high pH, which renders the product useful. It has been the author's experience, that one of the best agents to employ is sodium Alkyl Sulfate in an approximate one per cent concentration. I have also had very excellent results with triethanolamine lauryl sulfate in this product.

In connection with the use of a suitable wetting agent, not long ago, I encountered some very annoying trouble. I had made a batch of permanent wave lotion and after checking the thioglycolate content, which was a satisfactory 5 per cent, and taking a pH, which ran pH 9.35, I stored the samples in an oven for a 30-day stability test. A check of the pH after 10 days revealed a drop to pH 8.75. The pH continued to drop for the full 30 days; at the end of this time the pH was 8.2 and upon titration, the thioglycolate content ran 4.25 per cent. After several weeks of work, the trouble was traced to the wetting agent, which was, reacting with the free alkali, thus reducing the pH. A new wetting agent, namely triethanolamine lauryl sulfate, was substituted and henceforth, no more trouble.

The perfume can also give no end of trouble, in such media as alkaline thioglycolate solution, so that just as much care should go into the selection of a perfume as goes into the selection of the wetting agent.

In closing, a word might be said regarding the manufacturing procedure. It is recommended that all solutions be mixed in either rubber or Saran plastic crocks. If these are either unobtainable or deemed too expensive, stoneware may be used. Rubber, or Saran hose and connections are also recommended. An aluminum stirrer may be used if necessary. The hands of personnel coming into direct contact with the lotion should always be protected by wearing rubber gloves.

COURTESY HELENA RUBINSTEIN

Finishing and Freshening Lotions

By Harry Hilfer

"Finishing and freshening lotions" are rather loosely used terms used to characterize preparations which impart to the face a smoothening or cooling effect so that its texture may seem to be improved or the cooling effect will make it feel better. Many of the preparations characterized as one or the other actually overlap. It would therefore be simpler to describe finishing lotions as preparations which enhance the facial appearance such as a makeup—and the freshening lotions as preparations whose functions are sensory rather than visual.

Finishing lotions would therefore include makeup preparations in lotion form such as the makeup bases, and, if a point is stretched, the relatively new contour lotions which are designed to improve the facial texture by tightening of the tissues. The makeup bases owe their popularity to their ability to form a film causing the face to have a smoother finish than is possible with the use of face powder alone. This effect is due to a better distribution of colors and pigment in the film because of application by means of an aqueous vehicle which could be applied homogeneously so that the depth of film is more uniform than is possible by the application of pigments and fillers without any such vehicle.

The problems encountered in formulation of such a product consist in:

(1) Keeping the pigments and fillers in suspension.

(2) Having a sufficiently high density of the dispersed powders.
(3) Adjusting the drying time so that enough time is allowed for application before the film dries to a non-manageable or difficultly manageable point.

The formation of a stabilized emulsion in which a a relatively large concentration of pigments is incorporated is primarily dependent on the particle size of the pigments. The primary step would therefore be to grind the pigments to as small a particle size as possible. Since the function of the filler is largely opacification titanium dioxide is probably the most suitable agency. In practice the titanium dioxide should be ground with the colored pigments before their incorporation into the emulsion system. The minimum effective concentration is usually about 10 per cent of the formula weight, but a concentration closer to 20 per cent is the more desirable. Absorbent clays such as kaolin or some of the synthetic silicates are sometimes used to help the dispersion problem. However, the principal agencies used in stabilization of the system are emulsifiers such as triethylolamine soaps used in conjunction with auxiliary emulsifiers such as the monoglycerides.

A lipoid addition is also indicated in the formulation of products of this class. This serves a dual purpose. It primarily enhances the feel of the applied film on the face and acts as somewhat of a water repellent. By its incorporation perspiration will not cause the film to streak as readily as it would without it. The presence of the emulsifiers in the film would also prevent the perspiration in forming as unsightly large drops on the film surface.

The evaporation rate of the film may be controlled by the addition of small amounts of a humectant or by the incorporation of sufficient quantities of emulsifiers which also retard the evaporation rate. The preference seems to be towards the use of the emulsifiers since their use would yield a more water repellent film.

The contour lotions in contact with the makeup film depend in the use of either an astringent such as zinc chloride or a mechanicial means in order to achieve their desired result. The use of film formers has come into vogue recently. Prominent among these are the use of methyl cellulose and polyvinyl alcohol. Lotions containing these substances may be used either in an aqueous oil suspension or as part of an emulsion. If it is applied in a sufficiently thick film, the water on evaporation will cause the film to contract and in this manner tighten the tissues. The mechanism is entirely different from the activity of the astringent which depends on a partial protein precipitation. Some of these preparations however incorporate both means into the system.

Freshener lotions are primarily alcoholic solutions which may contain in addition to the perfume oils a mild irritant. As the name implies the purpose of this preparation is to freshen the skin. This implication would include as part of its function the removal of the skin excretions and also to generally cause a sense of well being making the face feel good. As originally formulated, skin freshners contained about 15 per cent of alcohol in water containing an aqueous floral extract. However most of the preparations now in use contain larger quantities of alcohol—the average being about 35 per cent.

It is difficult to classify skin freshner by that name or as cleansing lotion, many of which are similar preparations. Perhaps the easiest division is determining whether or not an astringent is used as well—even though alcohol in 35 per cent concentration also acts as an astringent. The presence of alcohol in this concentration causes a considerable cooling effect because of the fast evaporation rate of the application. This cooling may be enhanced by the addition of a small amount of menthol and this addition is fairly common.

Further astringent effects are introduced by the addition of zinc salts such as sulfocarbolate or even the chloride—though this latter should be used sparingly. The function of the astringent is to tighten the tissues by inducing a mild precipitation of the proteins within the cellular tissue. Too great a precipitation would kill the cell which is not desirable. Since it is difficult to draw a sharp dividing line, most manufacturers depend on the alcohol as the astringent rather than using the more potent agencies.

The basic formulation for products of this type may be elaborated upon to enhance any one or more of the functions desired. If the detergent activity should be desired increased, any one of a number of non ionic detergents may be added to enhance it. The polyethoxylated sorbitan esters for example are easily incorporated. Bacteriostatic activity may be introduced by addition of a quaternary ammonium compound or other agency.

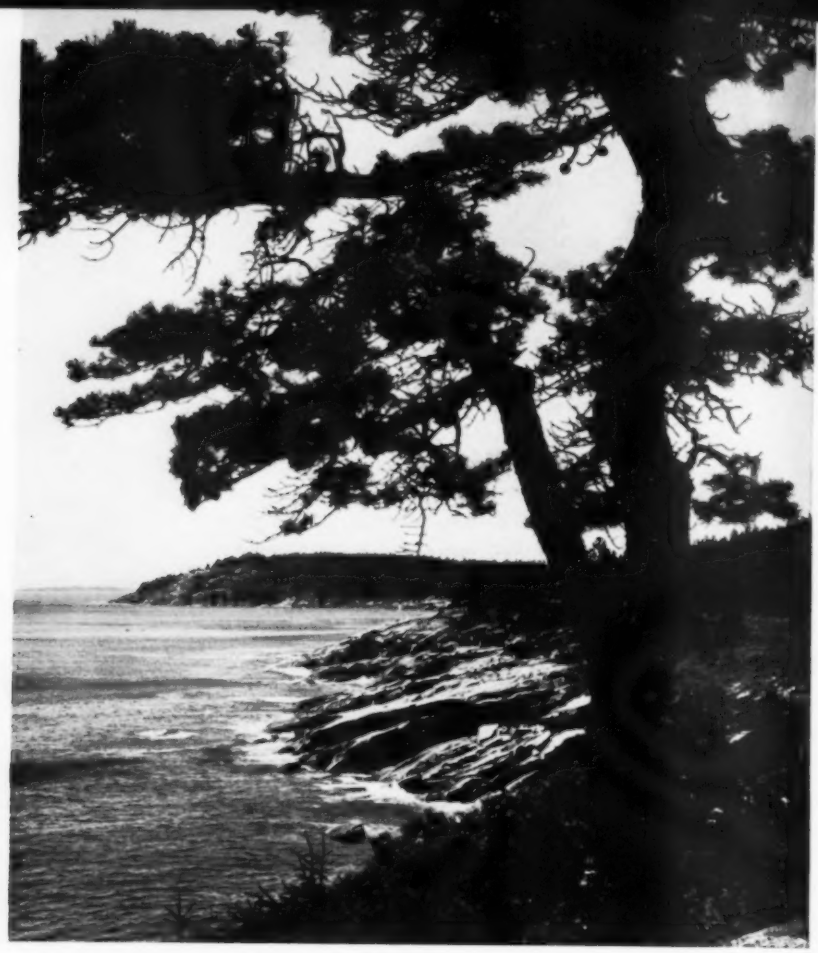
If a stumulant is desired to help increase the blood circulation on the skin surface in the area of application, substances such as resorcin mono acetate may be added —but their use must be limited to a low enough concentration to keep this irritational effect down to a minimum. Balsam Peru is another favorite as well as Witch Hazel.

In some cases humectants are also added to leave a thin film on the face after application, since there are many women who feel that the usual freshener leaves the face too dry. Actually there is no harm done by such an inclusion though my recommendation would be toward the use of agencies which are not as hygroscopic as is glycerol propylene glycol for example. Glycerine is a splendid humectant—and indeed its use for that purpose is still well ahead of those materials which have come on the scene more recently—but

(Continued on page 268)

The Drug Industry and New England

by Robert F. Larson



EWING GALLOWAY PHOTO

New England can offer many distinct advantages to the manufacturer of ethical drugs, particularly those firms anticipating expansion or seeking site locations," revealed the report, *A Survey of Industrial Opportunities in New England.* This survey was conducted by Arthur D. Little, Inc., for the Federal Reserve Bank of Boston. The ethical portion of the drug industry, manufacturers of drugs sold under written prescription from a physician, has enjoyed rapid growth during the past decade. This growth is expected to continue although not quite as rapidly as in the past few years. The industry continues to offer good profit margins which have encouraged expansion and have tempted outsiders, such as chemical producers, to the industry.

When considering the location of manufacturing facilities, the requirements that pertain to the industry as a whole, should be investigated first. If the location meets these over-all requirements, the long-range plans of management plus the specific factors, which may or may not rule out the location, should be investigated next.

Some of the factors that must be considered are:

(a) Public utilities such as power, water, gas, etc.

(b) Labor
(c) Materials—both supply and location of raw materials
(d) Research
(e) Management
(f) Geographical location
(g) Distribution of finished products, i.e., nearness to market

These factors will now be investigated item by item.

(a) Utilities

With the exception of those companies which manufacture antibiotics, utility costs to the drug industry are not of particular importance. The industry is characterized, with this exception, by the manufacture of materials whose production is in terms of pounds rather than in tons, and which require relatively small quantities of power, water, gas, etc. Of these utilities, water is the most important. This is particularly true in the manufacture of parenteral solutions, which must not only be free of chemical contamination, but also of pyrogens. One of the advantages of New England's water supply is its softness. The supply is adequate and the quality is such that in many cases, the water can be used without special treatment. This is true for the manufacture of emulsions, syrups, solutions or other liquid preparations for oral use. In the manufacture of antibiotics, water is of two-fold importance. First, from a formulation standpoint, and second, because of the large amounts required for cooling purposes. Locations on the New England Coast offer the advantage of unlimited quantities of sea water for cooling purposes. Chas. Pfizer & Company, Inc., at its Groton, Connecticut, plant has found this to be a particular advantage. This nearness to the sea has also been an important factor in the problem of waste disposal from antibiotic manufacture; the soluble wastes can be piped directly into the ocean. There is also the problem of non-soluble waste disposal, which can be solved in New England's small town by the availability of wasteland as in the case of the Pfizer plant in Groton.

A disadvantage, but not an unsolvable one, in the New England location has been the comparatively high fuel costs for steam and electric power. The small New England municipalities, however, seem to be interested in offering possible solutions to these higher rates.

(b) Labor

The drug industry is characterized by a high proportion of scientific personnel (as high as ten percent) mainly for research and control and in some instances for production. Semi-skilled labor constitutes about sixty percent of the labor force and the balance is made up of unskilled labor. New England offers a very adequate and stable labor supply of all these categories.

(c) Materials—supply and location

The character of the raw materials used in the drug field is such that the location does not affect costs; practically all materials are sold on a delivered basis. Since the advent of antibiotic manufacture, however, certain materials such as cornsteep liquor, molasses, lactose, and amyl acetate, have been used in very large quantities and transportation rates therefore have become a factor. Although this may be a disadvantage to a New England location, there is the possibility of using water transportation to offset some of these high costs. It is the feeling of many people, not only in the drug industry, that the possibilities of water transportation have been overlooked, particularly in this area.

(d) Research

Research is particularly essential to companies in the drug industry. In order that a company maintain or improve its competitive standing in the industry, it is imperative that an active and productive research department be maintained. Major drug companies have been spending from three to six percent of sales for research purposes, and in some small but growing companies as much as ten percent has been allocated to research. Thus it can be seen that there is a high demand for research personnel within the industry. Qualified researchers such as organic chemists, chemical engineers, pharmacologists, bio-chemists, microbiologists, pharmacists, physicians, and clinicians are needed. In fact, today there is even a demand for physicists and researchers with special qualifications such as knowledge of radioactive materials. This active research is considered one of the most essential factors for the growth of a drug company and New England offers particularly outstanding advantages in this respect.

New England has the most concentrated area of medical, clinical and research activities in the world. Not only does this area offer some of the most outstanding educational institutions, such as M.I.T., Harvard, Boston University, Yale, and many others, but also many of the leading medical centers, such as the Massachusetts General Hospital, Peter Bent Brigham, Joslin Clinic and the Leahy Clinic. It is a well-known fact that many of the large manufacturers have looked to New England for clinical research on new drugs to obtain clinical background for acceptance by the Federal Drug Administration.

In addition to the research facilities offered by several private institutions, colleges, hospitals, and medical centers, there are several top colleges of pharmacy available in New England such as the Massachusetts College of Pharmacy and the University of Connecticut College of Pharmacy. Even in the veterinary field, New England offers the Angell Memorial Hospital in Boston, probably the leading animal hospital in the world. Medical education is the finest in the country and it is common knowledge that many of the leading

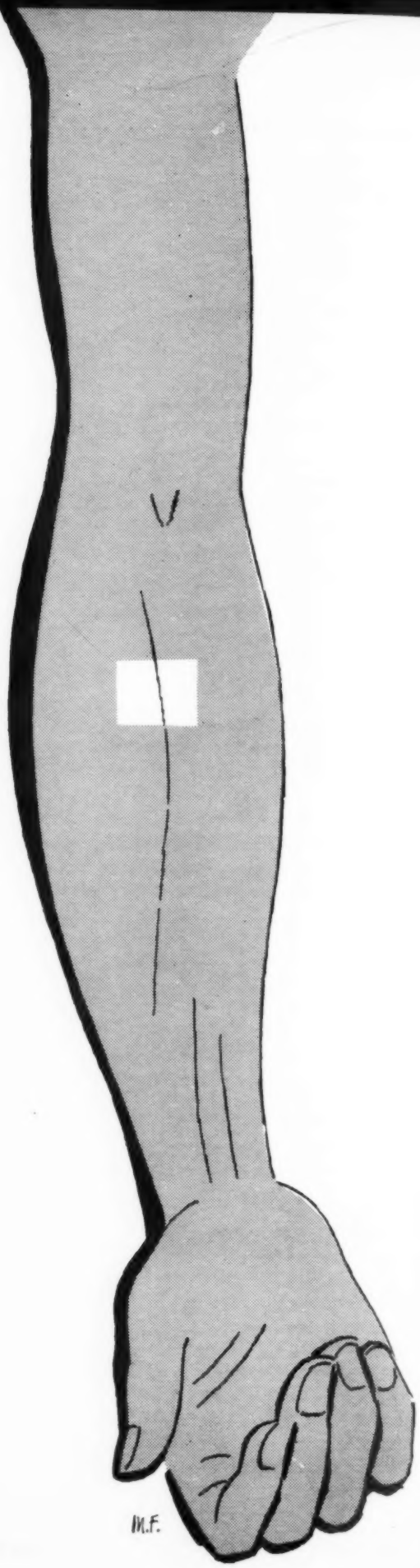
(Continued on page 264)

New Technique of Patch Tests*

by Herman A. Shelanski, Ph.D.
and Morris V. Shelanski, M.D.
INDUSTRIAL TOXICOLOGY LABORATORIES, PHILADELPHIA

New ingredients with potential uses in soaps and cosmetics are being made available in ever-increasing numbers and variety, from alchemical panaceas to zoological refuse. Many of these will be discarded because their cost is prohibitive in such highly competitive items. Many will never see the light of day because they do not meet the standards of efficiency, and many will fall by the wayside because they are harmful to the consumer. Once a material is approved on the basis of its cost and efficiency, there is a basis of certainty because the cost is calculated by simple arithmetic, and the efficiency is established by laboratory procedures which assure the standardization of the ingredient and which simulate use by the consumer. But the toxicity must be investigated on groups of animals and humans. The results of these investigations must be extrapolated to embrace the entire consumer population. Therefore, toxicity investigations must yield results of a predictive nature, and the accuracy of these predictions depends

*Delivered before Scientific Section, Toilet Goods Association, May 14, 1953.



upon the validity of the results. The subject of this paper pertains to one facet of toxicity studies, namely that of patch testing humans for skin reaction.

The object of this paper is three-fold:

1. To analyze skin reactions, and to deduce therefrom what information should be obtained in order to yield the most valid results.

2. To introduce a new technique in human patch testing based upon the foregoing deductions.

3. To compare the validity of this new technique with existing techniques, and to demonstrate its importance to the soap and cosmetic industry by actual experience with this technique.

Investigation of effects of a new ingredient on human skin is the final toxicity test before marketing. Facetiously, it could be called the "acid test" except for the fact that strong acids should have previously been eliminated, we hope, by investigations on animals.

One way of investigating reactions of human skin to a new ingredient is by means of the patch test. In this test, an ingredient is placed in contact with the skin by means of a patch. Usually, this patch covers an area of at least one square inch. Of necessity, the patch itself must be made of material which is inert or which produces no skin reaction. If the material to be tested is a liquid, a measured amount is placed on the patch which is then covered with an impervious film, suitable for the properties of the liquid studied. This film must also be inert with regard to the skin.It is also important that the film cover an area larger than the patch. This is done for two purposes; first, to prevent the evaporation of material under test; second, to prevent adhesive tape used to keep the patch in place from coming in contact with the skin immediately surrounding the patch. Adhesive materials used in tapes are often irritating to the skin. Solid ingredients to be tested are merely placed on the patch in measured amounts.

By coming in contact with this new ingredient, the skin may or may not react. Two types of skin reactions have been described in patch testing.

1. The skin may react on initial contact with a substance. This type of reaction is called *primary irritation* and is basically a local reaction and involves actual injury at the site of application.

2. The skin may react only after it has been previously exposed to a substance. A hypothesis has been advanced that after the initial contact, the body forms allergenic antibodies so that any subsequent contact with the substance produces an allergic response. This type of reaction is called *sensitization* and is a specific response of the body as a whole; it is not necessary for the substance to contact the skin at the original site in order to cause an allergic response.

Fatiguing Reaction

From past experiences with patch tests, we have hypothesized a third type of reaction. This type we have named *fatiguing reaction.*

The fatiguing reaction is characteristic of ingredients used in cosmetics and soaps which come into daily contact with the skin and produce reactions after prolonged and frequent use. These reactions cannot be called primary irritation or sensitization, because people reacting in this manner, after recuperation, show neither primary irritation nor sensitization when patch tested by existing techniques.

The authors have advanced this hypothesis to explain the fatiguing reaction. The skin has a protective mechanism which it is constantly rebuilding in response to insult. Primary irritants are so strong that they overcome the protective mechanism on a single contact. But there are ingredients which neutralize this mechanism to an extent which never, on one application, exhausts its protective capacity. The period of time necessary for the skin to rebuild its protective mechanism is greater than the period between applications of the ingredient. Therefore, the protective mechanism is not rebuilt to its original strength. Thus, with frequent and prolonged application of the soap or cosmetic, the protective mechanism continuously loses an increment of protective capacity. Eventually the ingredient overcomes the remaining protection offered by the mechanism and harms the skin. In brief, primary irritants are able to exceed the protective resistance threshold of the skin on one application, whereas, fatiguing irritants produce skin reaction by a summation of insults of a sub-threshold intensity.

In order for a patch test to give valid results it must not only detect primary irritants and sensitizers but also fatiguing substances. Of course, the most valid information can be obtained by actually testing the entire consumer population over a prolonged period of time. But even if this test were not impossible, it certainly would be time-consuming and costly. Therefore, we have to be satisfied with a more practical, though second-best method.

Repeated Insult Test

We have devised, what we consider, such a second-best technique. This technique consists of two phases, as follows:

In the first phase, the substance is applied to the skin of human subjects by means of a patch for a period of twenty-four hours and then is removed and the skin reaction is graded. The skin is then allowed to recuperate for twenty-four hours. This cycle of contact and recuperation is repeated fifteen times for a total of thirty days, the reactions being graded after each application. The second phase begins after the fifteenth application has been removed. The skin is allowed to recuperate for a period of two to three weeks. The material is then reapplied on the same subjects for forty-eight hours. At the end of this time the patch is removed and the reaction graded.

Since this technique more closely approximates the use of many products marketed by the cosmetic and soap industries than existing patch test methods, more

(*Continued on page 266*)

DR. ERNEST GUENTHER

"The Essential Oils"

A relatively short time ago, with the publication of the final Volume VI of "The Essential Oils," by Dr. Ernest Guenther, vice-president and technical director of Fritzsche Brothers, Inc., there was completed a masterpiece which will live as far into the future as one can predict. Here is a work on the important subject of essential oils, so monumental, so complete, and so authoritative, that it becomes the worthy and unquestioned successor to the works of Guildemeister and Hoffman, Parry, Finnemore, Charabot, and Gatin, which, for a very long period of time, were the final authorities on essential-oil information.

What makes this work so unique is that the information set forth in these volumes is, for the most part, first-hand information of the author. Not only did Dr. Guenther complete a thorough and expert investigation and evaluation of the published literature, but he has drawn on his own lifetime of experience to check the information given in the literature.

The original background for these volumes was a series of articles written by Dr. Guenther over a span of more than twenty years and published in various trade journals (including DRUG & COSMETIC INDUSTRY.) These articles were written on information obtained by the author during his many safaris to the various essential-oil producing areas of the world. On these trips, Dr. Guenther made many fast friends all over the world, and as a result of these friendships was able to obtain information never before revealed. Also, on these trips, Dr. Guenther was able personally to distill the particular oils from these regions and then make personal examinations of the true oils.

While abroad, Dr. Guenther not only took innumerable photographs depicting the production of the oils about which he wrote, but he also took beautiful color motion pictures. These motion pictures formed the background for lectures which he gave after every trip. Buyers and users of essential oils were invited to these lectures by Fritzsche Brothers, by whom Dr. Guenther was sent on these missions. It is for this reason that each volume is "*Dedicated* in deepest

(*Continued on page 262*)

CHLOROPHYLL In Vivo Vs. In Vitro

by William Mitchell, Ph.D. THE ALLEN CHLOROPHYLL CO. LTD.

The article "An Analysis of the Chlorophyll Problem" by Dr. A. H. Bryan has been read here with considerable interest. The volume of evidence in support of the activity of chlorophyll derivatives *in vivo* is considerable, and lends strong support to Dr. Bryan's views that much more research work is needed to clarify the matter; and that the critics should await the results of such work "before trying to wreck a new and thriving industry." The present writer has recently[1] expressed similar views in these words:

"Pending much more chemical, biochemical and clinical work, it would seem more reasonable to defer judgment, rather than to rush in, on the basis of a few scrappy experiments (or even no knowledge at all), and dismiss the matter. In the present state of our knowledge, or rather lack of knowledge, of drug action the critics appear to be rash, to say the least."

However, while agreeing with Dr. Bryan that the *in vivo* action may well differ from that *in vitro*, the writer cannot agree that water-soluble chlorophyllins have no action *in vitro*. Experience in these laboratories has shown these derivatives to have little or no action on all substances so far tested *except* odorous sulphur compounds. On these latter (and probably analogous selenium and tellurium compounds) there is a specific action. Thus we have shown[2] that 1 g. of sodium copper chlorophyllin 100 per cent (N.N.R. assay) in one per cent w/v aqueous solution will in 18 hours completely deodorize 0.4 g. of benzyl mercaptan, quantitatively converting it into (odourless) dibenzyl disulphide. Control experiments, without chlorophyllin, reached the same stage only in about 10 days. The chlorophyllin thus appears to accelerate the normal aerial oxidation of benzyl mercaptan, and is itself altered in the process, losing the power to convert further quantities—and thus not acting merely as a catalyst. Further, in the absence of air the oxidation does not take place, with or without chlorophyllin present.

In the case of methyl mercaptan, one g. of sodium copper chlorophyllin will similarly transform about 0.2 g. into dimethyl disulphide. This latter still has an offensive smell, and one g. of sodium copper chlorophyllin will deodorize only about 0.002 g. of it. This is in line with our finding that 1 g. of the chlorophyllin will deodorize only about 0.005 g. of garlic oil—again mainly an organic disulphide. The mechanism of this

(*Continued on page 265*)

REFERENCES

1. Mitchell, W., *Brit. Med. J.*, 16th May, 1953, p. 1112.
2. *Idem*, *ibid.*, 14th March, 1953, p. 621.

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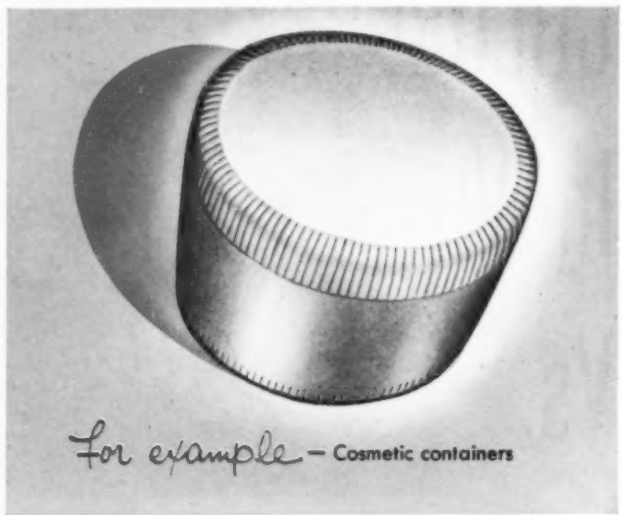
Fitments for glass containers—(metal or plastic closure and glass container all by Owens-Illinois)



for example — Cosmetic containers

for example—

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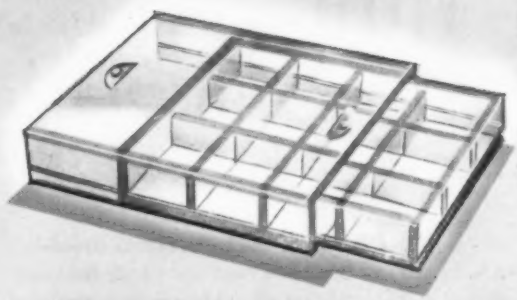

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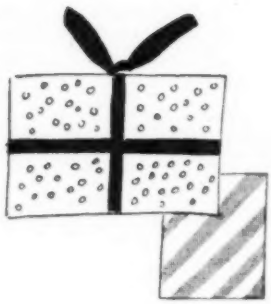


Packaging and Selling

Visit to Paris

We are waiting with a great deal of anticipation for the return from Paris of those electronic twins, Lee Swartout and Charles Granville, the two impulse starters who have made Angelique Perfume Company what it is today.

For twenty-five years now, we have been witnessing the continuous arrival of the French perfumer to this city and these shores. We have been very glad to meet these folks because we think they have contributed something very definite to the enjoyment of life in America, also because many of them have been very pleasant individuals who have become friends of ours, and last but not least, because during these twenty-five years, quite a goodly number of them have contributed substantially to our ability to eat and pay the rent.

It has been a very pleasant thing that this continuous flow has kept up with very little interruption, from Paris to New York, but it has been a one-way movement almost exclusively and it is for that reason that we look forward with sharp anticipation to the return of these two Yankees from the land of Lafayette.

According to reports leaking through from the French capital, the population there was almost instantaneously aware of the arrival of Mr. Swartout and Mr. Granville. In a preliminary interview, Mr. Granville stated: "We are getting tired of American women smelling French perfume and so we decided we are going to have French women smelling American perfume." When asked how that could be done in the course of a brief visit, Mr. Granville admitted that they had a secret formula. As best as we could tell, this secret formula is a mixture of Black Satin perfume together with a particular chemical which made the headlines in American newspapers last summer when so many cities were seeding the clouds to produce rain. Mr. Granville and Mr. Swartout are in Paris to rain perfume on the Parisians.

Our understanding also is that some diplomatic difficulties were encountered in getting the two planes in the air loaded with Black Satin perfume and the chemical needed to precipitate the rain scented with Black Satin perfume. Involved in this desperate situation was the French Ambassador to Washington, the American Embassy in Paris and various other political potentates not mentioned. We do not think that the League of Nations was involved in this. There was something said about angry cables to Congressmen and Senators and a statement in the Congressional Record by one Senator, which we have not seen. Probably, some of the French agitation and diplomatic upset was caused by the appearance of these Yankee salesmen in skunk hats carefully hugging a black bag which contained the perfume and the secret formula.

Our report is that the triumphant return to America will take place just about the time this issue comes out. We feel quite sure there will be photographs and other documentary evidence to support the agitated rumors that are leaking out of France.

Factory Environment

Du Pont is expanding research on industrial preventive medicine into a major project. The Haskell Laboratory of Industrial Toxology is being changed to the Haskell Laboratory for Toxology and Industrial Medicine.

Du Pont scientists have been probing the causes and effects of fatigue, of basic factors that make clothing comfortable, of methods for the early determination of abnormal heart conditions as well as investigating the toxicity of chemicals made for or used by Du Pont.

Some of the new modern factories that are being built in this industry and others are marvels of elegance and comfort for the individual worker. In a recent inspection tour to one of the newer factories in this industry where we entered a beautifully designed building surrounded by acres of lawn, we found inside perfect control of sound, light, air conditioning and filtering, complete temperature control, luxurious restrooms and in fact, as one other editor cogently remarked: "The environment here is so infinitely superior to the home of nearly every worker in that plant that one could hardly help reflecting what a potent social effect on home life a working environment of this sort is bound to have."

Unfortunately, the vast majority of plants in this country are coldly utilitarian with completely no thought for the workers' comfort, even in such el-

ementary things as eyestrain or protection from constant noise or unpleasing odors. It must be said, as any railroad traveller can tell in entering or leaving most cities, that a high percentage of successful businesses maintain factory slums. Perhaps the day will come when a factory slum will be just as much a cause for civic conscience as a housing slum. We believe this work that Du Pont is doing can be justified not only for its social benefits but for actual production results in better business morale, in better labor turnover and in more efficiency in work.

This I Believe

A prominent buyer of a prominent department store came to New York City a short time ago on a serious mission. This man felt that it was his solemn duty to warn the perfume and cosmetic manufacturers on whom he was calling that the industry was getting into a seriously bad way.

The reason for this bad situation, he stated, was that he found the public almost universally disbelieving things that were said in cosmetic and perfume advertising and that therefore advertising in this industry was turning in a poorer and poorer performance and also that the industry had gone so promotion-crazy that they were promoting themselves out of business. After performing a solemn duty and thus warning the manufacturers, this buyer then turned on the heat in each place he called in order to secure more advertising for his store and a new promotion.

Place-of-Purchase Puzzles

It has always been very interesting to us to study surveys which show the variations in the place of purchase as between one city and another. Some of these variations are so extravagantly large that it would seem leading retailers would make it a subject of real retail research.

For instance, in the recent study of consumer brand preferences in 29 Illinois cities published by the Illinois Daily Newspaper Markets of Springfield, Illinois, is a table of the place of purchase of cosmetic and toilet preparations. Here is how the place of purchase for cosmetics varies in these 29 Illinois cities.

Department stores receive an average of 19.8 per cent of the cosmetic business in these 29 cities. However, in Elgin, the department store did 36.7 per cent of the business whereas in Mattoon, the department store gets 1.7 per cent of the business.

Drugstores receive 48.1 per cent of the cosmetic and toilet preparation business in these 29 Illinois cities, but in Cairo, the drugstores do 74.2 per cent of this business, whereas in Charleston, they do 32 per cent.

House-to-house representatives get 14.2 per cent of the business in this group of cities. In Jacksonville these door-to-door people take 32.1 per cent whereas in Ottawa, they receive only 5.4 per cent.

Grocery stores average 8.8 per cent of the cosmetic business but in Champaign-Urbaba they receive 17.4 per cent as compared to Cairo where they receive 2 per cent.

All other stores, which must include variety stores, general stores and others take in 10 per cent of the cosmetic business in these 29 Illinois cities. This kind of store, however, takes in 37.3 per cent of the business in Charleston compared to .06 per cent in Kewanee.

It should be a liberal education for any retailer or manufacturer to travel these 29 Illinois cities with this particular list in hand. In one city he would find a department store in complete dominance, in still another city, house-to-house selling has prevented any retailer from winning a unique position and in a few other of these cities, some stranger to this industry, perhaps a jewelry store or a gift store has turned up with a flair and the energy and the merchandising ability to lure this kind of traffic and to give the kind of satisfaction that keeps bringing it back.

Practically every manufacturer who analyzes his retail accounts will discover the same differentials. In one city retailers will be completely falling down in his line. In another city of no better purchasing power or market value and with no better retailers the manufacturer is in a dominant position.

It would seem to us that this variation in market values could surely stand a lot of very serious research by both manufacturer and retailer. We believe that there is something more to this variation than the simple statement that one man is smarter than another or that one man is working harder than another.

Glass Aerosol

There has been a great deal of research in the packaging field to develop some method of packaging Aerosol or pressure products in a glass bottle. The bottle people have been working very assiduously on this and it was generally understood last year that one of the bottle makers had devised a method of coating the bottle with a clear over coating which would prevent the splintering of glass in the event that the bottle happened to break under pressure.

We have not heard that any really satisfactory method has been turned up so far by the glass people and as a matter of fact the can companies are turning out so many numerous, truly beautiful containers that there has not been any particular pressure from the cosmetic industry for the glass package.

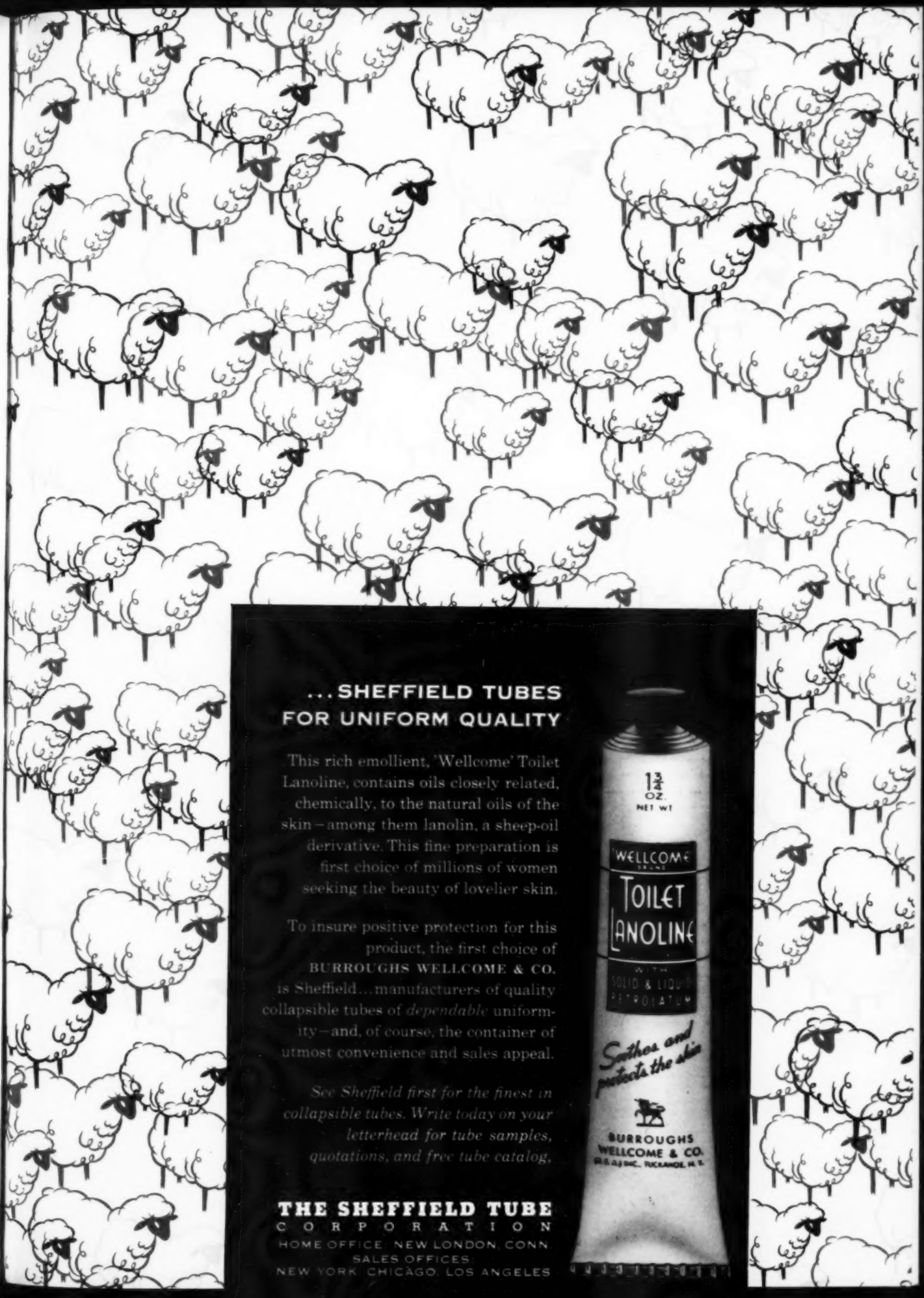
We understand now that Zonite has arrived at a compromise, using the glass bottle with an outer container of fibreboard. It will be interesting to see whether this combination packaging or a similar device will open up the growing use of Aerosol cosmetic products in a glass package.

More Light on Calories

We feel a sense of growing admiration at the way some of the high-calorie folks are fighting back. Sugar has our admiration because these folks are proving with terse punchlines that they are not nearly as much of a villain as the almost universal American dieteer believes. For instance, one half a grapefruit is said to equal three teaspoonsful of sugar.

But it is Bacardi which receives our highest eulogy, and I have no doubt that sometime, and we hope soon, the Bacardi people and their advertising men will receive some kind of an award of distinction from a grateful population, who otherwise might have lost a lot of sunshine in their lives.

A Barcardi cocktail has only 88 calories, which is less than you would think, according to the Bacardi peo-


...SHEFFIELD TUBES
FOR UNIFORM QUALITY
This rich emollient, 'Wellcome' Toilet Lanoline, contains oils closely related, chemically, to the natural oils of the skin – among them lanolin, a sheep-oil derivative. This fine preparation is first choice of millions of women seeking the beauty of lovelier skin.
To insure positive protection for this product, the first choice of BURROUGHS WELLCOME & CO. is Sheffield... manufacturers of quality collapsible tubes of dependable uniformity – and, of course, the container of utmost convenience and sales appeal.
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Soothes and protects the skin
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DRESSING UP makes the difference!

Have an economical salespackage that knows how to sell. This 6-ounce Duraglas stock-mold bottle, A-7314, and Empress molded closure combine quality and economy. Other sizes: ½, 1, 2, 3, 4, 8 and 16 ounces.

Sparkling glass... lavish labels in ACL... a crown of color give you a sales-package with that exclusive look.

May we submit our ideas for a Duraglas salespackage for your products?

Duraglas packages are protectors of quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

ple. A Bacardi highball has less calories than a medium egg. A Bacardi Old-Fashioned has less calories than half a grapefruit. A Bacardi Daiquiri has less calories than a glass of skim milk and a Bacardi Cuba Libre has less calories than a lamb chop. We would like to suggest to the Bacardi people that if they can only turn up a few vitamins, hormones, enzymes, animo acids, trace elements or something like that in Bacardi, that they will have the world by the tail. Lots of people would much rather go on a high Bacardi diet than a high protein diet but they will have to postpone this until these Bacardi folks go one step further in their nutrition research.

Hope Not

According to a recent survey, the A & P attracts most of its shoppers with meat. Now that some of our vigorous drug chains are going into self-service and tying up with food stores, maybe we'll see a meat department in a drugstore.

Mass Sells

A full stock of a product in a retail store increases sales, sometimes to an amazing degree. Recently a study conducted in seven supermarkets under normal store conditions brought this out with startling clarity. The products tested were first displayed under the conditions which had been prevailing normally in these stores, for a period of two weeks, and then for the following two weeks the same shelves on which these products had been placed were stocked to capacity with ample stocks of these products.

Gains for toilet preparations were: dentifrices, 37.6%, shampoos, 43.5%, baby items, 74%. Food products averaged almost as high, and the average increase in sales for all products was 22.7%.

The reasons for this increase in sale is attributed to: (1) Out-of-stocks are eliminated; (2) The effective mass always sells more; (3) Impulse selling is aided by this mass, particularly in less favorable shelf positions; and (4) An atmosphere of fast selling and consumer interest is created.

The cosmetic industry is well aware of the fact that if number one were eliminated, that is, the question of out-of-stock items, many brands would be in a far more favorable situation sales-wise. This is particularly true in the department store where inventory shortages are a constant headache to brand promoters.

Left Handed Earnings

A very old friend of ours has been employed in one of the leading defense plants now for over twelve years. This company is famous, or perhaps we should say, notorious, f r the hysterical pace which one of the services has forced upon it for a period that began about two years before the War.

Just recently this company established a practice of annual physical examinations for its executives. Our particular friend, who some years ago had had a mild low-blood pressure, was told by the company doctor on his last physicial examination that he now had high blood pressure at a point that must be watched carefully. When our particular friend expressed surprise and some degree of alarm to the doctor for being told that he now had hypertension, the doctor remarked in a perfectly calm and sincere way that practically every executive in this company has turned up with hypertension. Isn't this a wonderful recommendation to get a job with these people?

Say it with Ink

Have you tried the Imperial Rosebud perfumatic ball point pen. According to the manufacturer, Imperial Pen and Pencil Company, Inc., Nassau, New York, this is a pen which writes with a lasting fragrance.

As Others See Us

Here is a description of what may very well be an average group of middle-aged American males taken in any community, club or business group.

A New York State health official examined an average group of State employees for heart conditions and he described them as "Too fat, gets too little exercise, smokes too much and relaxes inadequately with cocktails and television."

Whitler Deodorants

The deodorant has been one of the cosmetic industry's most dynamic growth products during the last ten years. In the sense that the deodorant is relatively new in cosmetic history as compared to hair preparations which in some form are as old as cosmetic history, we could probably say that deodorants, starting almost from scratch, have been the big plus in the shortest time of anything that has been added to the cosmetic industry.

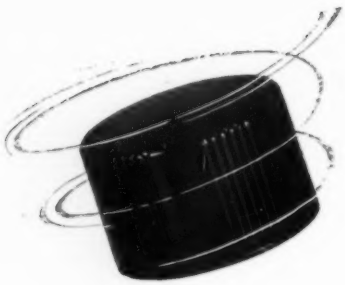
As deodorant sales have piled up to millions of dollars and as each magazine and newspaper survey has shown that 70 to 80 per cent of all women have been regular users of a deodorant, and as these surveys also show that men are swinging into line as regular users, the industry has gradually become aware that the deodorant has become a plain, utility product.

Today there is very little chance of introducing fashion or glamour or anything like that into a deodorant product. The consumer simply wants performance, and increasingly they see no need to pay a high cosmetic price for a deodorant performance. To the American public today, the deodorant is as plain and matter-of-fact a utility product as a cake of soap.

This utility character and the unwillingness of the consumer to pay too high a price, plus the fact that the consumer has shown clearly that he is interested in ease of application, may indicate the beginning of a drastic change in the form and application of deodorants. It may mean that the deodorant is passing out of cosmetic classification into the toilet article classification and it may even mean that this industry may have a fight on its hands to hold its deodorant business.

Three important chemical companies, that is, Givaudan-Delawanna, Monsanto and Hilton-Davis now have on the market a bacteriostat which effectively prevents the growth of bacteria on the body and by making perspiration bacteria free, makes it virtu ally odorless.

One of these products for several years has been incorporated in a soap and since they lend themselves to



Faster Capping

To run your capping machines faster—without increasing breakage or downtime—use Armstrong's "Hi-Tork" Plastic Caps. They have the extra strength needed to take the punishing torque and impact of modern, high-speed capping equipment.

"Hi-Tork" Caps are reinforced at points where stress is concentrated. Dome, thread, and skirt are designed so that each takes its exact share of impact. The external design has been simplified to eliminate projections, and thread contour is designed to give a better seal with less strain.

You can prove the ruggedness of Armstrong's "Hi-Tork" Caps on your own lines. For details, call your nearest Armstrong office or write Armstrong Cork Company, Glass and Closure Division, 5308 Chambers St., Lancaster, Pennsylvania.

ARMSTRONG'S *"HI-TORK"* MOLDED CAPS

incorporation in any type of cosmetic product such as a cream or lotion or rinse or shampoo, it may be that we will have a whole new conception entering the cosmetic industry—that is including deodorizing as well as fragrance in many types of cosmetics.

Whatever may be the product evolution, it would seem certain that these new bacteriostats have introduced an interrupting idea into the dynamic growth of cosmetic deodorants.

Lotions Gaining

Colgate is market testing a new cream lotion shampoo called Cue, in several cities. It is just a few months ago that Colgate put on the market a lotion companion to Lustre Creme. Can it be that Colgate thinks there is a consumer trend away from creams to lotions?

One Up for Sugar

The sugar people have certainly come up with a wallop in this battle of the calories that is so increasingly occupying American thought. According to B. W. Dyer & Company, sugar chemists and brokers, a greater life expectancy is generally found in countries where consumption of sugar and products containing sugar is high. While the company admits this may be due to a higher standard of living in the big sugar countries, still it must be admitted that they have made a point which is very definitely one up for sugar. Countries which have a high annual per capita sugar consumption, that is, over 65 lbs. per capita, include U. S. A., Sweden, Denmark, Switzerland, the United Kingdom, Australia, New Zealand, South Africa and the Netherlands. The average life expectancy here is 62 years.

Life expectancy dropped to 54 years with a per capita sugar consumption of 30–65%. These countries include Poland, Czechoslovakia, France, Belgium, Norway and Finland.

Life expectancy is only 48 years in the countries where there is less than 30 lbs. per capita sugar consumption. These countries are: Soviet Russia, Hungary, Austria, Egypt, Italy, Greece and Spain.

Distribution Keeps Costing More

The cost of distribution is something like the weather; that is, everybody talks about it, but nobody does anything about it. Reid Grigsby, Associate Marketing Specialist for Louisiana State University, says that our economic system is so complex that it costs more to market farm products than to grow them. In July, 1952, according to this marketing specialist, farmers received about 48c out of every dollar of the 4.5 billion dollars spent on farm foods.

Not many manufacturers of package merchandise are getting 48c of the consumer's dollar. In this industry—toilet preparations—probably from 20 to 30c on the dollar goes to the manufacturer. As for ethical pharmaceuticals—probably the less said about the cost of distribution and the differential between what the manufacturer gets and what the public pays, the better.

The reason for the high cost of distribution, according to this expert, is probably a result of our present way of life, entailing "building" security. Labor is pegging wages as high as possible. A corresponding increase in cost follows in every product which labor helps produce. The part that labor plays in distribution, covering transportation, packaging and many other complex operations shows a tendency to increase costs because the public demands more service and apparently is willing to pay for that service.

Bigger but Better

At least we improve in one way. Americans are an inch taller, weigh ten pounds more and live twenty years longer than they did up to 1900. The average life span is now sixty-seven years, as compared to forty-seven years in 1900. Also, Americans are eating 13 per cent more food than they did when the century began and that is the thing that is causing such a row all around the country.

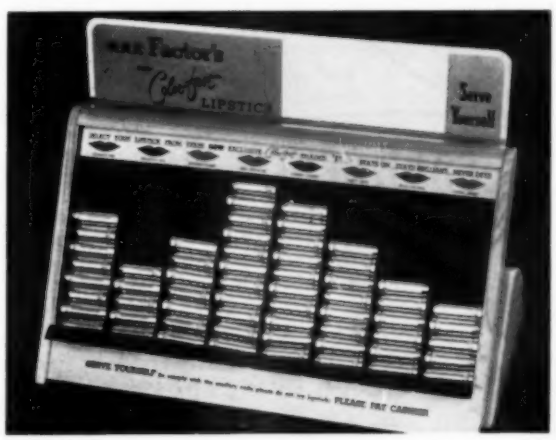
Sell Both Ways

Max Factor has been very active recently in point-of-sales merchandising, according to the publicity releases. The two more recent releases show this leading cosmetic firm moving in two different directions and in fact, attempting to carry water on both shoulders, in store merchandising.

Max Factor has developed what it calls the first self-service patented lipstick dispenser. This is a display case that is twenty-one inches wide, twelve and three-quarters inches high and ten and three-eighths inches deep. It is made of blonde ash wood, is easily refilled and offers the customer a range of lipsticks in eight different shades which she can easily pick up by simply pulling a lever. The customer is then supposed to carry the lipstick over to the cashier and pay the bill.

If pilferage becomes too serious, the case can be locked so as to appear simply as a display stand.

Max Factor is also introducing what it calls the "first" visual demonstrator as a solution to the present-day personnel problems in department stores. Because there is so much transient personnel, this counter unit can be used to train the salesgirls quickly or to sell in the absence of a clerk by holding a customer until the salesperson can arrive. The visual demonstrator gives a complete story of skin care and makeup in picture and caption form for the benefit of the customer and gives the salesperson tested selling phrases on the back of the display.



Continental's artists translate ideas into packages that sell

MAY WE TAILOR A PACKAGE FOR YOU?

To Continental people, your proprietary product is more than a powder or pellet looking for a wrapper. It's a personality—and we do our best to hand-tailor a container for its needs.

That is why our artists are eager to see your design properly adapted to look well on a round, oval, tall or flat package...and take such pains in helping you select colors that are both pleasing and appealing. That is why our lithographers fuss so over plate-making details...and why pressmen as well as inspectors make sure that your package is lithographed and produced to our high standards.

No two manufacturers have exactly the same problems. From long experience we have built up a list of package services that our customers have found helpful. We'd like a chance to hand-tailor these services to *your* particular requirements.

CONTINENTAL CAN COMPANY

Continental Can Building,
100 E. 42nd Street, New York 17, N. Y.

EASTERN DIVISION
100 E. 42nd St., New York 17

CENTRAL DIVISION
135 So. La Salle St., Chicago 3

PACIFIC DIVISION
Russ Building, San Francisco 4

Doin's

Bristol Laboratories has prepared three new products: Kectil, for the comprehensive treatment of specific and non-specific diarrheas including bacillary dysentery, paradysentery, salmonellosis and diarrhea of the newborn; Mutamycin, which combines equal parts of dihydrostreptomycin sulfate and streptomycin sulfate as a sterile dry powder in vials, the solution of which is useful in the injection treatment of infections caused by gram-negative or acid-fast organisms; and Centrine, a new synthetic anti-ulcer drug having a potency far greater than any known antispasmodic and anticholinergic therapeutic agent.

Abbott Laboratories has added a new pint economy size bottle of Sucaryl Sweetening Solution to its line. It is a companion product to the 4-fluid-ounce bottle.

The E. L. Patch Co. is distributing Dalzinate for the treatment and control of peptic ulcer, hyperacidity, pyloric spasm and associated conditions. It offers the combined advantages of dihydroxy aluminum aminoacetate, phenobarbital, homatropine methylbromide and ascorbic acid.

Wyeth has added Fowl-pox Vaccine to its veterinary line. It is used for the vaccination of chicken, turkey and pheasant flocks where fowl-pox has previously appeared or of newly-established flocks in areas where fowl-pox is or has been observed.

Wyeth has also introduced Bicillin C-R (Compound Repository), valuable in the treatment of penicillin-susceptible infections and as long-term prophylaxis against secondary bacterial infection.

As an aid for surgery in cancer operations, the company has prepared Injection Direct Sky Blue, 4 per cent, an azo dye found to possess all the qualities necessary for vital staining of lymphatic tissue.

Jean Patou has introduced a matching eau de toilette to Joy, known as the costliest perfume in the world. It matches its namesake in fragrance and exceptional lasting quality and has the same exciting overtones of rose and jasmine.

Trylon Products Corp. has introduced a new 59-cent package in its tablet Bubble Bath line, featuring a Candy-Stripe design. It contains 20 tablets and represents the same value as the other trylon 33-cent package.

Lilly has introduced Ointment Ilotycin (Erythromycin, Lilly) Crystalline for the treatment of may superficial infections caused by gram-positive organisms such as impetigo, boils, infected burns and barber's itch. At the same time the company announced Ilotycin Pediatric, a cherry and cinnamon-flavored medicine in liquid state for children to be used for a wide range of diseases, among them, pneumonia, bronchitis, tonsillitis and sinusitis.

Lilly has also combined tablets Paveril Phosphate with Amytal to produce a preparation for patients with emotional disturbances which may increase nervous tension.

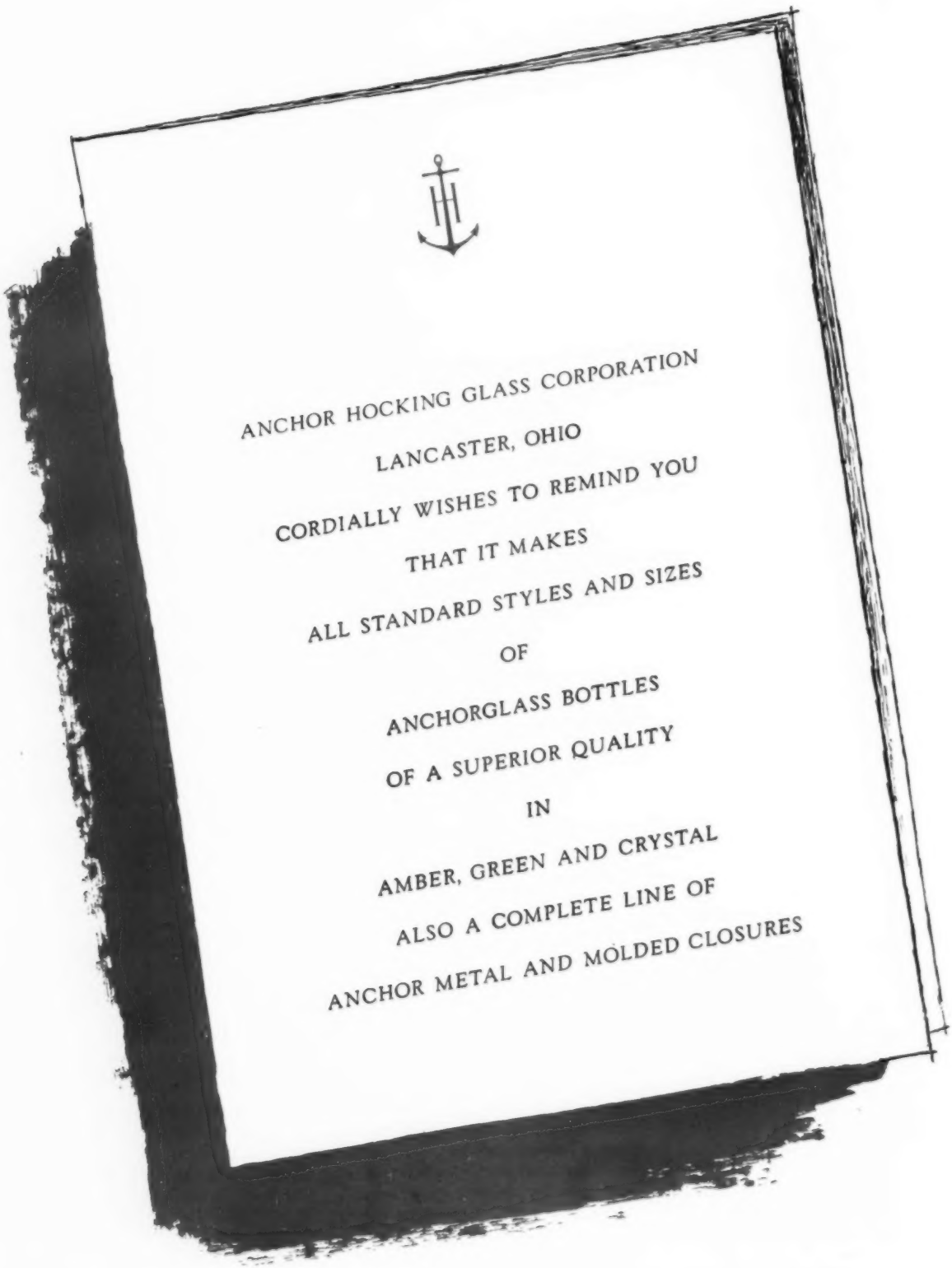
The Upjohn Co. has developed a new drug, Pamine, which has exhibited great promise of effectiveness in the treatment of peptic ulcer.

Schering Corp. is distributing Cortomyd Ophthalmic Suspension-Sterile which has an antibacterial and anti-inflammatory action. It is recommended for acute, chronic and allergic blepharitis, conjunctivitis, corneal ulcer and scleritis, among other conditions of the eye.

Strong Cobb & Co. is marketing a new agent for either treatment or prevention of poison ivy, called Aqua Ivy A. P. The injection material is in a water solution thus making injections almost painless and easy for physicians to use.

George A. Breon & Co. has introduced Pomalin, an anti-diarrheal mixture. The drug combines a locally-acting sulfonamide, and sulfaguanidine, with kaolin and pectin.

Shulton has introduced a distinctive gift set in the Desert Flower Hand and Body Lotion and Desert Flower Toilet Water. It is packaged in stand-up box with green, gold and white decor to match the modern Desert Flower motif. The company is also presenting a new gift set in its Old Spice for Men line of shaving req-


ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO
CORDIALLY WISHES TO REMIND YOU
THAT IT MAKES
ALL STANDARD STYLES AND SIZES
OF
ANCHORGLASS BOTTLES
OF A SUPERIOR QUALITY
IN
AMBER, GREEN AND CRYSTAL
ALSO A COMPLETE LINE OF
ANCHOR METAL AND MOLDED CLOSURES

Doin's ... (CONTINUED)

uisites. The new pressurized lather shaving cream—Old Spice Smooth Shave—has been combined with the After Shave Lotion and the Talc.

Elmo Cosmetics will promote a new liquid cleansing cream, called Photo-Sheen, early this Fall. It is the company's equivalent of its Ultrae Cleansing Cream, in the more convenient liquid form. Photo-Sheen is packed in attractive plastic bottles.

Schwarz Laboratories has announced that it can now furnish any desired quantities of L-amino acids, including L-arginine, L-aspartic acid, L-glutamic acid, L-histidine, L-Lysine, L-Phenylalanine and L-Tyrosine uniformly labeled with C^{14}.

Susi Press Co., Whitinsville, Mass., is distributing Bloc-Men, a "before-shave" face conditioner. It is especially designed for users of electric razors and is also recommended for men who use safety razors and a wet shave. Each Bloc-Men stick is sufficient for 3 months of daily shaving.

Helene Pessl is launching five new items for Fall and Winter business with emphasis on special Christmas selling: Santa's Chimney, a red brick chimney with fireplace base container which holds a bottle of toilet water; a 4-ounce bottle of toilet water packaged with its own glass atomizer; a box of four cakes of Little Lady castile soap imprinted with the Little Lady doll; a 2-ounce bottle of toilet water packaged with 10 sheets of note paper and envelopes; and finally, a boy's hair lotion, Young Lad Hair Trainer.

Smith, Kline & French Laboratories has prepared Acnomel Cake, a new acne medication which can be used like foundation make-up in a compact. It is a companion form to SKF's Acnomel Cream, which was the first medication desitned to relieve the psychic as well as physical distress of acne by masking the facial lesions.

Helena Rubinstein has a new compact powder, Minute Make-up, the first compact powder to contain lanolin.

Seaforth has come up with a Solid Deodorant for Men, containing Chlorotex, said to give fast-acting and long-lasting protection against perspiration odor. It does not stain or damage the clothing.

Packer's Tar Soap, Inc. is introducing an attractive new glass bottle-pack for both Packer's Pine Tar Shampoo and Packer's Olive Oil Shampoo.

Maltbie Laboratories has prepared Malcotran, a new product for the management of peptic ulcer and gastrointestinal spasm. It is a potent anticholinergic and ganglionic blocking agent that provides a high degree of selectivity for the gastrointestinal tract.

Upjohn has also released Erythromycin tablets of 100 mg. for the treatment of pneumococcic, staphylococcic and streptococcic infections, particularly patients who are sensitive to other antibiotics and in infections resistant to other antibiotics.

Drug Brands, Inc. has changed the name of its rubbing alcohol compound to Purex Plus with the inclusion of a new ingredient called Terinal.

Q-Tips Sales Corp. is featuring an entirely new, longer, slimmer package of Q-Tips that has been especially designed by beauty experts for applying make-up. They are presented in a beautiful orchid color package.

Personal Luxuries, Inc., Newton, Pa., has announced the preparation of Mulsifin, a lubricant for aging dry skin. It is sold in 2-ounce bottles.

Prince Matchabelli will provide a special value this Fall, of a gift crown of Beloved Perfume with both the 4-ounce and the 2-ounce magnum crowns of Beloved Cologne Parfumee.

Tussy Cosmetiques will introduce Moisture Cream, a new cream for dry, aging skin, in September. It is greaseless, yet emollient, and leaves no residue.

The Ar-Ex Cosmetic Co. has a new Enriched Night Cream that will be of special importance to women with excessively dry, sensitive skins, and especially those with allergies.

RICHFORD SPILLPROOF PERFUME FLACONS

THE PURSE SIZE FLACON THAT CHANGED THE PERFUME MERCHANDISING OF A NATION!

THE NEW SQUARE SPILLPROOF

MEMO

SALES TIPS TO REMEMBER FOR BOOSTING YOUR PERFUME SALES

1. The lower unit price of expensive perfumes packaged in Spillproof purse size flacons enables your woman customer to try many different fragrances at relatively small expense. She *actually pays* to sample fragrances . . . once sold she (or the men in her life) will buy larger sizes.
2. Perfume carried daily in Spillproof purse size flacons is consumed far more rapidly than standard size perfumes left on your customer's dresser.
3. The convenient size and lower unit price of perfumes in Spillproof purse sizes entice your woman customer to carry and use both "day" and "evening" perfumes, boosting consumption even more.
4. The lower unit price of perfumes in Spillproof purse sizes enables your woman customer to accept perfume normally beyond her means in her everyday life. She no longer thinks of it as an expensive "evening out" luxury.

RICHFORD CORPORATION
251 FOURTH AVE., NEW YORK 10, N. Y.

MANUFACTURERS:
Early Response Sensational!
Write today for samples and prices.

Lots of families keep their medicine cabinets stocked with products made by The Howell Company. These people want their remedies right there when they need them. It's a practical application of the old saying "A bird in the hand is worth two in the bush."*

Ready when needed...

The Howell products shown here are sealed with Crown Closures. They provide a dependable seal . . . easy application . . . simple removal. The liners in these closures are scientifically selected for the individual product.

Before deciding on a closure and liner for your product, talk to Crown. The facilities of our laboratories and the sealing knowledge we have acquired in working with manufacturers over a long period of years are at your disposal without cost or obligation. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

**The Howell Company, Inc. of New Orleans, Louisiana, produces H. L. R., Compound Lotion of Calamine, P. B, 999, Jeanne Mauray Lotion, and other drug products as well as Big Chief Imitation Vanilla Flavor, Summer Joy Root Beer Extract and Imitation Strawberry Flavor.*

CROWN CLOSURES

Approved by millions of housewives

133% increase AEROSOLS packed

CSMA Survey Proves

ALMOST 100 MILLION! In 1952, according to a recent report issued by the **CSMA** (Chemical Specialties Manufacturers Association), leading packers of aerosol products loaded approximately 98,000,000 units. This compares with roughly 42,000,000 units packed during the year before and represents an over-all increase of about 56,000,000 . . . a gain of 133%.

Although aerosol space insecticides and room deodorants represented the largest volume of household-type products, with a combined total exceeding 44,400,000 units, many other aerosol product types showed remarkable gains . . . some as high as 1417%. Many of these new product types, such as water repellents, rug shampoos and other household items that were introduced only within the previous twelve months, totaled almost 3,100,000 . . . an increase of well over 2,880,000 units.

PERSONAL-TYPE AEROSOLS INCREASING IN POPULARITY! Shave creams also made rapid gains throughout the year and many old, familiar names appeared in aerosol dress. Aerosol hair lacquers spurted to about 7 million. Personal-type aerosol packages reached a total well above 25 million . . . a sevenfold increase over 1951.

Other new aerosol products of miscellaneous types, such as Christmas "snow," lubricants, antistatic sprays and many others, represented a combined total of more than 13 million units, compared to fewer than 3 million

KINETIC

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon propellents.

DU PONT
SAFE

in number of during 1952

Steady Trend Upward

of the same products packed during the previous year.

By far the greatest number of all these aerosol units were packaged in the popular twelve-ounce container, but containers of six ounces or less accounted for a third of the total.

"Freon" Propellents an Important Factor

Because Du Pont FREON® fluorinated hydrocarbon propellents are ideal for use in pressure-packed products, the vast majority of aerosols contain one of the various "Freon" propellents available. There are 21 different "Freon" propellent solutions used in the 40 different aerosol product types now on the market.

"Freon" propellents are widely used because they are manufactured in strict accordance with exacting, laboratory-controlled methods that insure both their quality and uniformity and the satisfactory operation of the aerosol product. In addition, they are safe . . . nonflammable, nonexplosive, virtually nontoxic.

Why not consider packaging one or more of your own products in modern aerosol containers? Established contract loaders will package your products to specifications in any quantity desired. Technical assistance is also available from Du Pont. A booklet, "Package for Profit," will be sent upon request. Address: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

"FREON" PROPELLENTS

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

NEW PERFECTION
DROPPING PARTS
meet EVERY
"Satisfaction Test"

QUALITY	A-1
UNIFORMITY	A-1
PERFORMANCE	A-1
CLEANLINESS	A-1
SERVICE	A-1

#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Metal cap: AMEKINE oil-resisting synthetic rubber bulb; blunt glass.

They're A-1 with your customers, too . . . assuring you repeat sales!

When you sell a product that pleases and satisfies your customers, you're assuring yourself of their goodwill and continued patronage. New Perfection Dropping Parts help to give you that kind of a product. They are convenient, attractive, dependable—manufactured and assembled under careful and constant inspection to assure the highest possible quality.

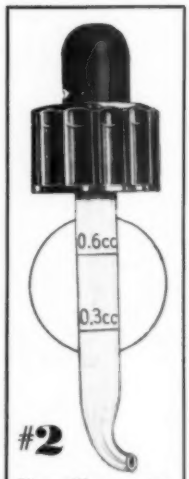
RUBBER BULBS are supplied in many styles and colors. Oil-resisting AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS of plastic or metal can be furnished in a complete range of sizes and colors.

DROPPER GLASSES are available in a wide variety of styles and sizes; plain or CALIBRATED in any color to mark specific dosages.

• • • • •

We can make up dropping parts to fit your own bottles or we can supply bottles in an attractive modernistic style in Amber, Blue, Green, or Clear glass, complete with dropping parts, in the following sizes: 2 cc, 1/8, 1/4, 1/2, 1 and 2 oz.



#2

Non-rolling extra-depth Bakelite cap: thick flange rubber bulb; special bent glass. (Calibrated in color).

• • • • •

WRITE FOR SAMPLES AND QUOTATIONS

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

Few things can lose a repeat sale faster than a tube that breaks and lets your product ooze out. Because customers blame it on the product, not the tube. Messy business. Costly business. And unnecessary business. We've been making better tubes for 28 years now. Let us show you what we mean.

Sun Tube Corporation
Hillside, New Jersey...Waverly 3-0400

COLLAPSIBLE TUBES . . . ALUMINUM AND ZINC CANS.

SALES REPRESENTATIVES

St. Louis 1, Missouri: Marvin Yates Co., Arcade Building
Cincinnati 8, Ohio: Ralph H. Auch, 3449 Custer Road
New Orleans 19, Louisiana: R. P. Anderson Co., 925 N. Solomon Pl.
Houston 19, Texas: R. P. Anderson Co., 5643 Overbrook Lane
Dallas 2, Texas: R. P. Anderson Co., 1122 Texas Bank Building
St. Paul 1, Minnesota: Alexander Seymour, 712 Pioneer Building
West Coast: Wm. J. Stoepker, 301 E. Colorado, Arcadia, California
Canada: Sun Tube Corp., 145 Spruce Street, Ottawa, Ontario
Mexico: Tubos de Estano, S. A. de C. V., 174 Oriente No. 267, Colonia Moctezuma, Mexico, D.F.

glamorize and merchandise

your solid cologne
solid toilet water
facial and hand creams
deodorants
after shave lotions

with the **NEW KING SIZE**
1 OUNCE CAPACITY

cal umet

IN GLORIOUS COLORS AND COMBINATIONS

no moulding required... product can be poured directly into container... eliminates necessity for costly foil wrapping.

CALUMET *Manufacturing Co., Inc.*

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IN CANADA: CALUMET DIVISION OF ERIC H. HARDMAN, LTD.
137 WELLINGTON ST., WEST, TORONTO, CANADA

PAT. PEND

DOW

SAFE SOLVENT FOR PHARMACEUTICALS

Solids put into solution with DOW PROPYLENE GLYCOL, U.S.P. will make your formulations for injection more effective and readily acceptable

Propylene glycol, U.S.P. by Dow is used in many approved and accepted pharmaceutical preparations for injection, internal consumption and for topical application, too. Answering the special needs of the industry, this solvent is a good carrier. It forms a preparation that is an acceptable medicinal, and above all it is *safe*.

The useful properties of propylene glycol as an emollient, humectant, lubricant and preservative can also be valuable in your formulations. The versatility of its solvent properties extends to many organic chemicals, making it well worth your consideration for use in estrogens, antiseptics, salves, elixirs and ointments. For further information about propylene glycol, U.S.P. write to THE DOW CHEMICAL COMPANY, Midland, Michigan, *Dept. OC 3-30 A.*

you can depend on DOW CHEMICALS

DOW

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News . . .

Rider Heads Coty Research

Dr. T. H. Rider, formerly director of research and development of the Lever Brothers Co., has been appointed director of cosmetic research of Coty, Inc., according to Philip Cortney, president.

Jean Martin has been made director of Coty's research laboratories, and Dr. Yolande Valer, assistant to the director.

DR. T. H. RIDER

Klarmann Named V. P.

Dr. Emil G. Klarmann has been appointed vice-president in charge of technical services, according to Edward Plaut, president, Lehn & Fink Products Corp, as part of the company's continuing program of expanded activities in the professional products field.

Recognized as one of the country's leading scientists in drug and cosmetic research, Dr. Klarmann has been chief chemist and vice-president for Lehn & Fink Products Corp., including Lehn & Fink division, Tussy and Dorothy Gray, for more than 25 years.

Ackley Named Chicago Mgr.

William D. Ackley, midwestern representative of van Ameringen-Haebler, Inc., since 1946, has been appointed manager of the firm's Chicago offices, according to A. L. van Ameringen, president.

Dirman Appointed by Armour

John F. Dirmann has been named division manager with offices in San Francisco for Pacific Coast operations of the Armour Laboratories, according to Richard S. Siers, sales manager.

Johnson Appointed by Du Pont

Thomas D. Johnson, Jr., has been named sales manager for Freon fluorinated hydrocarbon propellents, succeeding F. L. Shackelford, Jr., who has new responsibilities in the rubber chemicals division of the organic chemicals department at du Pont.

Named S&D Production Mgr.

John S. Baker has been named production manager of the new Australian manufacturing plant of Sharp & Dohme, according to W. B. Wimpenney, vice-president. Located in Sydney, the Australian plant is currently under construction, and the beginning of its full-scale operation is planned for 1954.

JOHN S. BAKER

Antibiotic Div. Renamed

Chas Pfizer & Co. has changed the name of its antibiotic division under the general managership of Thomas J. Winn, to Pfizer Laboratories, division of Chas. Pfizer & Co., because of the increase in its line of prescription products. To the present line of antibiotics, including terramycin, penicillin, streptomycin, polymyxin and bacitracin, will be added a full line of hormones, including estrogens, androgens, progesterone and the new synthetic steroid, Neodrol. Combinations of the male and female hormones will also be marketed.

Mulford Kimble Mgr.

R. H. Mulford, a vice-president of Owens-Illinois Glass Co., has been elected vice-president and general manager of Kimble Glass Co., a subsidiary. Formerly director of Owens-Illinois' department of personnel administration, he now succeeds S. J. McGiveran, whose new responsibilities will be announced at a later date. Mr. Mulford will report to C. R. Megowen, president of Owens-Illinois, who is also chairman and president of Kimble.

Mulinos in CSC Post

Dr. Michael G. Mulinos has been appointed medical director for CSC Pharmaceuticals, according to A. K. Hamilton, vice-president in charge of product divisions of Commercial Solvents Corp.

Joins Squibb Institute

J. Oliver Lampen, research scientist who worked with Nobel Prize Winners Carl and Gerty Cori, has been appointed director of the division of biochemical research at the Squibb Institute for Medical Research. He had formerly been Associate Professor of Microbiology at Western Reserve University Medical School.

OLIVER LAMPEN

Eaton Promotions

Drs. Henry and Mary Paul, husband-and-wife biochemistry team at Eaton Laboratories, have been given new research positions, the former having become assistant research director, and the latter, chief of the biology division.

Dr. Henry Paul will work with Dr. William B. Stillman, director of research and development, in coordinating the biological research divisions.

Pfizer Promotions

Malcolm K. Nielsen has been appointed western regional chemical sales for Chas. Pfizer & Co., according to Marshal N. de Noyelles, manager of the chemicals sales division. Jack D. Langlois succeeds Mr. Mauer as assistant industry manager of medicinal chemical sales.

Rebak, Dist. Mgr., Grace

Vincent L. Rebak, formerly vice-president in charge of sales for Dodge & Olcott, Inc., has been appointed New York district sales manager for Grace Chemical Co., wholly owned subsidiary of W. R. Grace & Co. C. J. Bown has been named Memphis district sales manager of Grace.

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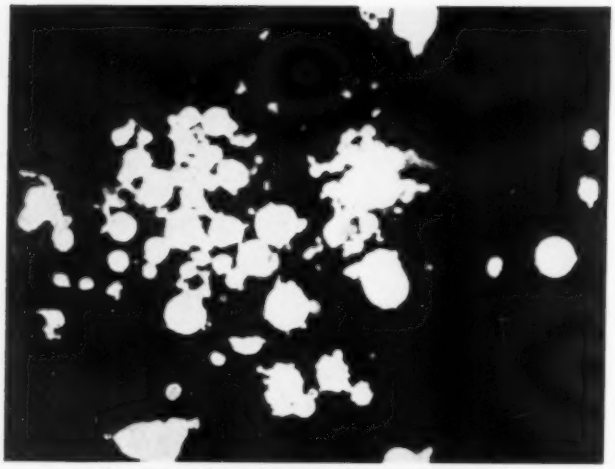

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Which Magnesium Trisilicate best fills your needs? Ask for samples for testing. If special physical or chemical specifications are required, perhaps we can manufacture your Magnesium Trisilicate to your own standards. We do this for companies who can order in sufficient volume. Simply address J. T. Baker Chemical Co., Phillipsburg, New Jersey.

Baker

Baker Chemicals

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Kipfer Retires from Lilly

Ernest B. Kipfer has retired as executive sales director of Eli Lilly & Co. and will be succeeded by Alfred J. W. LeBien, formerly executive director of merchandising. W. R. Spurlock replaces Mr. LeBien.

John F. Lee becomes director of the sales personnel unit, while O. B. Swearingen succeeds Mr. Lee as director of bulk sales. W. F. Kraas, Jr., will advance to advertising director.

ERNEST B. KIPFER

ALFRED J. W. LEBIEN

O. B. SWEARINGEN

Warner With Emery

Dr. Kenneth N. Warner has been appointed to the research department of Emery Industries, Inc., according to Dr. Kadesch, research director. He will be associated with the new chemicals department under the leadership of Dr. C. G. Goebel.

Warner-Chilcott Addition

Warner-Chilcott Laboratories division of Warner-Hudnut, Inc., began installing equipment in the newly-erected plant addition at Morris Plains, N. J., last month. The facilities are expected to be in operation during the latter part of September.

Dirr Named Chairman

Peter G. Dirr, assistant secretary of McKesson & Robbins, Inc., has been appointed chairman of the Social Security Committee of the Commerce and Industry Association of New York, Inc., according to Thomas Jefferson Miley, executive vice-president. He succeeds Harry G. Waltner, Jr., of Standard Oil Co. of New Jersey.

McNamara Honord by Fritzsche

James H. McNamara, dean of the the sales staff of Fritzsche Brothers, has retired from active duty after 35 years of service with the company. He was honored at a cocktail party and dinner by his firm on July 1 at the New York Athletic Club. Sharing the honors were his wife, Marion, and his son, Michael.

Others participating in the celebration included Frederick H. Leonhardt, chairman of the board, and John H. Montgomery, president. Each paid high tribute to his long and memorable association with the company and wished him many future years of health and happiness.

Additional men who spoke included vice-presidents H. P. Wesemann, Dr. Ernest Guenther, Fred Leonhardt, Jr., and Joseph A. Huisking, and other executives and department heads. A total of 25 participated in the celebration.

Revlon Expansion

Revlon World Wide Corp. has been organized for further sales expansion, according to Charles Revson, president of the parent company, Revlon Products Corp. Edmund F. Buryan has been appointed general manager of the company which will operate in Mexico, Central America, Cuba and other Caribbean Islands and South America.

W. Tyrie Stevens, formerly stationed in Havana, has been appointed a regional sales manager for Revlon World Wide, with headquarters in Bogota, Colombia. Joseph Singer, formerly in Revlon's New York office, has been appointed branch manager in Cuba. Joseph Buenaga has been transferred to Central America from Puerto Rico and has been replaced in that area by Monte Smith.

Harold Judelson has been transferred from Rio de Janeiro, Brazil, and is now a market manager in New York for the new unit.

Monsanto Consolidation

Monsanto Chemical Co.'s Cleveland office is now under the jurisdiction of the organic chemicals division, with Bernard B. Langton as general branch manager, according to John L. Hammer Jr., general manager of sales for the division. Mr. Langton succeeds R. H. Baugh, who is transferring to St. Louis as manager of administrative services for the company's phosphate division.

Verona Telephone Change

Verona Chemical Co., Newark, N. J. has been assigned the New York telephone, Enterprise 6178, so that customers in New York may call the company direct.

Fritzsche Brothers Cocktail and dinner party honoring James H. McNamara, who is retiring from the sales staff of the company, at New York Athletic Club. Clockwise, around table, are, beginning in foreground: Mrs. Elizabeth Adelmann, Thomas J. Coyle, Ray Thompson, Arthur Howlings, Robert Krone, Fred Hilbert, R. W. Wilmer, Dr. E. H. Hamann, Kenneth W. Tracy, Charles Schneider, Mrs. Theresa Spoerer, Ellis Merkl, D. A. Neary, Dr. Ernest Guenther, Mrs. Marion McNamara, John H. Montgomery, Jim McNamara, F. H. Leonhardt, Mary Neary, Fred Leonhardt, Jr., H. P. Wesemann, Michael McNamara, Joseph A. Huisking, Gus Wohlfort and E. P. McDonough.

*

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Smith-Dorsey Conference

The divisional sales managers of the Smith-Dorsey division of the Wander Co. held a 3-day national sales conference in Lincoln, Neb., during the middle of July. It was conducted by H. R. Sievers, sales manager. The group discussed plans for new-product releases and an intensified sales expansion program.

Divisional sales managers attending Smith-Dorsey sales conference in July. Left to right, Front row: R. W. Babb, comptroller; E. A. Bergfeld, Dallas division Manager; V. T. Johnson, vice-president, Smith-Dorsey; B. B. McRoy, vice-president, Wander Co.; Hart Johnston, president, Wander Co.; T. E. Watson, San Francisco division manager; W. M. Dye, Los Angeles division manager; G. R. Underwood, medical director; Howard Hopkins, plant manager; D. W. Duke, assistant to sales manager; and R. A. Wells, credit manager. Back row: R. J. Baker, Kansas City division manager; J. M. Shea, Memphis division manager; H. R. Sievers, sales manager; F. S. Bukey, director of pharmaceutical research; and F. H. Stone, Twin Cities division manager.

Promoted by Lehn & Fink

Jack R. Erickson has been appointed regional sales supervisor on the West Coast of Lehn & Fink Products Corp. and will maintain his headquarters at 6132 South Mansfield Ave., Los Angeles. He had formerly been a sales representative for the company, covering the Rocky Mountain area and the western states.

S&D Appointments

Edmund H. MacLaughlin has been named research associate in the Pharmacy section of Sharp & Dohme, division of Merck & Co., Inc., according to L. Earle Arnow, vice-president and director of research of Sharp & Dohme. Dr. John R. Beem has been appointed staff physician in the medical division of the company.

EDMUND H. MacLAUGHLIN

DR. JOHN R. BEEM

Friberg Completes Trip

Eliot Friberg, West Coast division manager for Florasynth Laboratories last month concluded an extensive trip to the East Coast, where he visited the new Florasynth plant at 900 Van Nest Ave. in New York City. He also attended the Institute of Food Technologists Annual Meeting and convention in Boston. On his way back, he spent some time at Florasynth's Chicago headquarters with other members of the executive staff, discussing the plans for merchandising and sales promotional activities on the West Coast for the balance of this year.

Gair Appointments

A. F. Brewster, general sales manager of the container division, Robert Gair Co., has assumed complete charge of operations at Gair's Teterboro corrugated box division. He is replacing Floyd C. Costello who is taking an extended leave of absence.

George A. Bowen, Jr., has been named assistant advertising manager.

Merker Appointed by P-D

Dr. Harvey Merker has been appointed director of scientific relations of Parke, Davis & Co., according to H. J. Loynd, president. He will be responsible to the executive office for various technical assignments and will handle special scientific speaking engagements.

Nat. Vit. Foundation Moves

The National Vitamin Foundation, Inc., has moved from 150 Broadway to more adequate quarters at 15 East 58th St., New York 22, according to Dr. Robert S. Goodhart, scientific director.

Coty Buys Lucien Lelong

Coty, Inc. has purchased the controlling interest in Societe des Parfums Lucien Lelong, Paris, and in Lucien Lelong, Inc., an Illinois corporation, with offices in Paris, New York, Chicago and Los Angeles. Coty has not purchased the building owned by Lucien Lelong, Inc., however, and therefore, a new corporation may have to be formed, according to Philip Cortney, president of Coty, because of legal and tax considerations involved in the transaction. The new firm will be known as Lucien Lelong Co. and will conduct the operations of the perfume business.

The effective control of Lelong was assumed by Coty earlier this month. Joseph S. Stein continues in the direction and management of the business, along with the present personnel. There will be no change in the present policies.

Winthrop-Stearns Expansion

Winthrop-Stearns Inc. has acquired a new building, located at 2020 Greenwood St., Evanston, Ill., to serve as its branch sales and shipping headquarters in the Midwest, according to Dr. Theodore G. Klumpp, president. It will house Winthrop's commercial sales office, professional service office and warehouse. Robert A. Jarecki is branch manager.

Squibb Promotes Ashworth

Henry Ashworth has been appointed manager of E. R. Squibb & Sons division (Mathieson Chemical Corp.) for the Dallas district. He has been with the company since 1939, mostly as full line representative in the San Antonio area.

The Lady from Athens knew

FINE PERFUMES ARE PREREQUISITE FOR SUCCESS

In the later days of Greek luxury perfume was an integral part of every banquet, and the choice of dinner fragrances could make or break an Athenian hostess. Customs change but patterns persist. Today in the marketing of a new fragrance product, the choice of a perfume base can spell the difference between success or failure. Consumer preferences are intricate and capricious and a knowledge of this aspect is demanded as well as artistic and technical skill. D&O maintains a special laboratory for preparing products for consumer testing and analyzing these results. Consult D&O.

Authentic Greek perfume urn. Design probably derived from ancient Greek custom of perfuming the wings of doves and allowing them to circle over the heads of banquet guests.

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WILMORE H. MILLER

STUART K. HENSLEY

K. K. BOYD

Toni Exec. Appointments

Wilmore H. Miller has been named vice-president in charge of operations of the Toni division of the Gillette Co., according to R. N. W. Harris, president. At the same time, Stuart K. Hensley was named vice-president in charge of sales, advertising and brand promotion. Mr. Miller will be responsible for all divisions of the Toni Company, including liaison with Gillette on merchandising of Toni products outside the United States.

Mr. Hensley, who has been sales manager of Toni for the past 2 years, succeeds Mr. Miller as head of the advertising and brand promotion departments as well as retaining management responsibility for sales.

Bristol Promotes Zimmerman

Edgar C. Zimmerman was recently promoted to manager of pharmaceutical production at Bristol Laboratories, according to J. D. McNitt, vice-president in charge of manufacturing. He will be in charge of all pharmaceutical production and will supervise the activities of the planning, sterile operations and bulk preparations, and the packaging and filling departments.

William H. Schmidt has become head of the filling and packaging department, replacing Mr. Zimmermann.

Penick Revises Territories

Byron La Forge, formerly special representative for the essential oils and water soluble gums departments of S. B. Penick & Co., has been appointed a general representative for all Penick lines. He will cover 43rd St., Manhattan, and the entire area from 43rd St. up to and including Yonkers, N. Y.

Arthur Kirby will devote all of his time to customers in Brooklyn and Long Island, while Fred Rauch and Marius Thode will continue to service certain special accounts, as they have in the past.

New Plant for Calco

American Cyanimid Company's Calco Chemical division will build a $14-million titanium dioxide plant on the outskirts of Savannah, Ga., according to Kenneth C. Towe, president. Construction of the new plant will begin during the last quarter of this year and will be completed early in 1955. This will be Calco's third facility for titanium dioxide production, the other two being in Piney River, Va., and Gloucester City, N. J.

Belloff with Eaton Labs

George B. Belloff, V. M. D., has been appointed assistant to the medical director of Eaton Laboratories, Inc., where he will supervise an extensive research program in problems of veterinary medicine under the direction of Dr. L. Eugene Daily. He succeeds Harold D. B. Roberts, D. V. M., who is departing on military leave.

Boyd, V. P., Emery

K. K. Boyd, formerly director of sales and purchases, was recently elected to the newly created post of vice-president in charge of sales and purchases, Emery Industries, Inc., according to J. J. Emery, president. Mr. Boyd has been with the company 18 years, having started as a marketing specialist, later becoming director of purchases and sales, and secretary.

Slevin with Winthrop-Stearns

Dr. Desmond Slevin has joined the medical department of Winthrop-Stearns Inc., as associate medical director, according to Dr. Theodore G. Klump, president. He will assist Dr. E. J. Foley, medical director.

Hays with Puritan Drug

William O. Hays was recently appointed manager of the Puritan Drug Mfg. Co., having previously been chief pharmacist at Crile V. A. Hospital.

Left to right, Fred Wilckens, president; Lessing Kole, chairman of the board; and Henry Groh, general manager, Kolmar Laboratories, laying cornerstone of building at Barrie, Ontario, Canada, which will serve Canadian customers. Ceremony took place June 22.

JOHN THOMPSON

LOUIS MIGNACCA

WILLIAM A. GRAY

D&O Sales Appointments

Dodge & Olcott will soon open a branch office in Toronto, Ontario, to be managed by John Thompson, a native of Toronto. He has been a sales representative in the industry since 1945, covering Toronto and Ontario.

Louis Mignacca has joined the New York City sales staff of the company, and William A. Gray has become a member of the Chicago sales staff and will work out of the Chicago branch office managed by Ken Hartley.

SKF Wins Injunction

Smith, Kline & French Laboratories has obtained a permanent injunction against Heart Pharmaceutical of Nevada from "making, advertising, offering for sale, marketing, delivering or selling" dextro-amphetamine sulfate tablets, or any drug having similar therapeutic effects, in the shape and color of SKF's "Dexedrine" tablets. Heart Pharmaceutical of Nevada was located at 319 E. Fremont St., Las Vegas.

This is another round in the company's fight on product counterfeiting, according to O. J. May, executive vice-president.

Schering Consolidation

Schering Corp. has purchased the Eno-Scott & Browne property and plant in Bloomfield, N. J., in order to consolidate its offices in the 100,000-square-foot concrete building on the 4½-acre property adjoining Schering's research laboratories. The move will enable the company to house under one roof the executive and administrative staffs now in seven separate locations in Bloomfield and Montclair.

Schering's proprietary and cosmetic subsidiaries, Union Pharmaceutical Co. and Artra Cosmetics, will also be quartered in the new building. Occupancy of the quarters will be delayed until late summer, 1954.

Du Pont Expansion Program

E. I. du Pont de Nemours & Co. has has started a $2-million expansion program at two plants manufacturing Freon fluorinated hydrocarbon compounds for the refrigeration and aerosol industries. The major part of the new manufacturing facilities will be located at the Chambers Works plant of the organic chemicals department at Deepwater Point, N. J., where ground was broken in July for a 4-story building and service facilities. This is scheduled to go into operation next April.

At East Chicago, Ind., construction also began in July on another continuous manufacturing unit to supply additional Freon to rapidly-growing aerosol and refrigeration equipment manufacturers in the West Coast and Central States areas. This unit is slated for completion within three to four months.

Promoted by SKF

N. Ramsay Pennypacker has been appointed assistant foreign advertising manager for the foreign subsidiaries of Smith, Kline & French Laboratories, according to F. M. Rivinus, Jr., president of the foreign division. He will be associated with Smith, Kline & French Inter-American Corp., SKF International Co., SKF, S. A. (Mexico), and SKF Overseas Corp.

Murphy Represents Mills

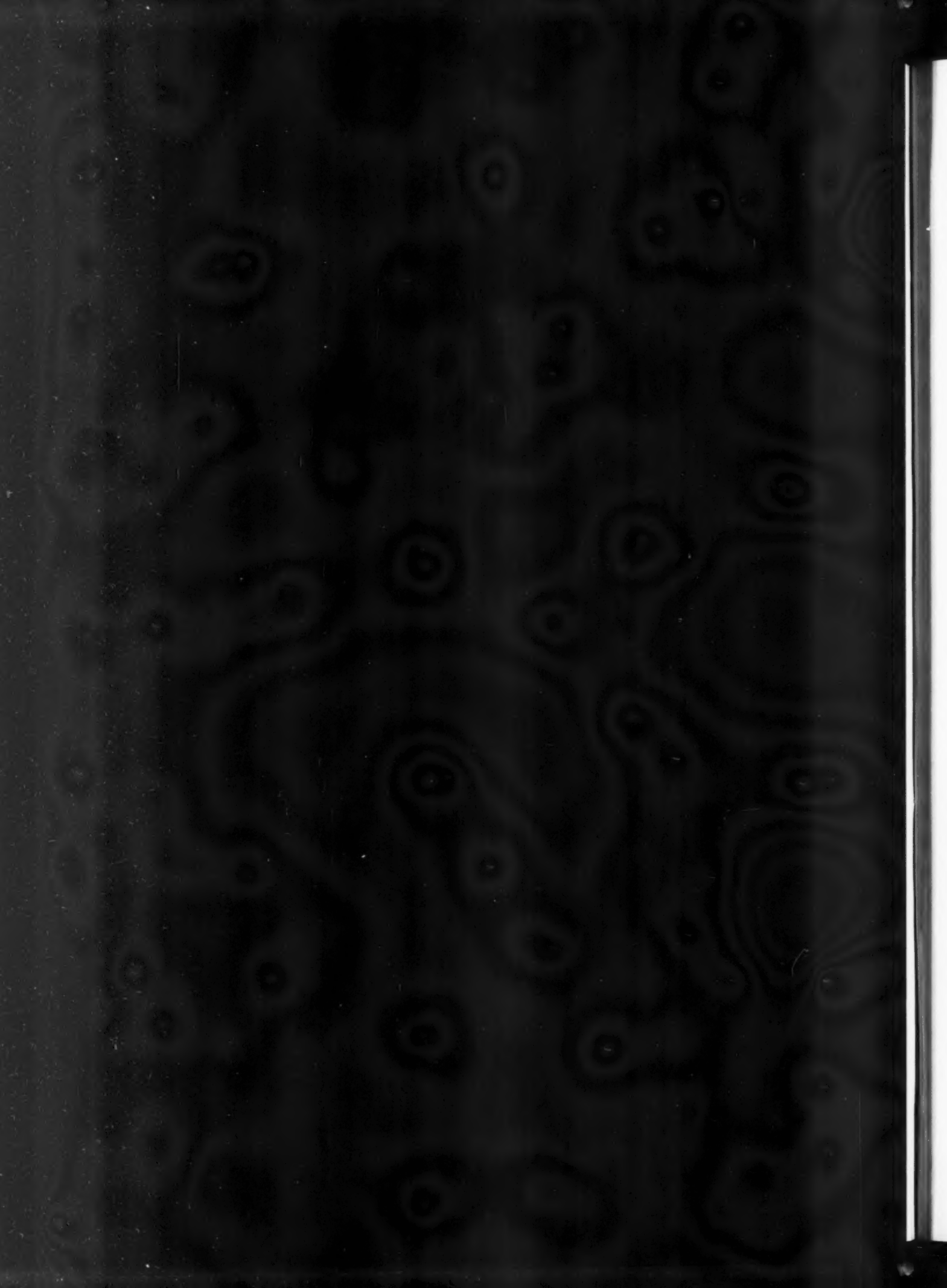
Peter J. Murphy has been appointed New York representative of the bottle division of Elmer E. Mills Corp. and will cover New York, New England and the Middle Atlantic States. He had formerly been national sales manager of container products at Plax Corp.

PETER J. MURPHY

Resigns as Baxter Head

Dr. Ralph Falk, founder and president of Baxter Laboratories, Inc., since 1935, has resigned and will continue to be chairman of the board. William B. Graham, vice-president in charge of production and research since 1942, has been named executive vice-president.

Architect's drawing of Schering Corp.'s newly-acquired administration building in Bloomfield, N. J., located on a 4½-acre tract adjacent to its research laboratories.



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U.S.I. CHEMICAL NEWS

August ★ A Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1953

ATTENTION

Users of Taxfree and Specially Denatured Alcohol

Now is the time for users of specially denatured alcohol to renew their basic permit (Treasury Department Form 1479) for 1954. It is also time for users of Taxfree alcohol to complete and file with the Assistant District Commissioner — Alcohol and Tobacco Tax Unit — their application (Form 1450) for renewal of their Taxfree Alcohol permit for 1954. If you require forms or any assistance in their preparation, please call your nearest U.S.I. office.

New Skylight Panels Let Winter Light In, Keep Summer Sun Out

An unusual way of automatically varying transmitted solar light and heat with the season of the year has been revealed in a new glass panel for flat skylights. Each panel unit is a hermetically sealed hollow glass box, evacuated for insulating purposes. Prisms on the inside of the top glass govern the amount of daylight and solar heat transmitted, depending on the position of the sun. The bottom piece has an uneven surface to diffuse the entering light and distribute it evenly to the area below. Between is a sheet of plastic material to soften the light and augment the vacuum insulation.

When installed so that the panels are oriented within 30 degrees of the geographic north-south axis, the skylight transmits light from the north half of the sky and from the lower part of the southern sky — which is desirable in winter when the sun is low. Prism design on the underside of the top glass is such that a large part of direct sunlight coming from the higher southern sector (where the bright summer sun is) is reflected. Thus, as the sun's elevation changes with the seasons, light entry is controlled automatically, with much of the brightness and heat eliminated during summer months, it is said.

Bulletin on Zinc Dust

A bulletin describing various applications of zinc dust was issued recently. The publication gives details on the use of zinc dust in the manufacture of paints and bleaches, as a reducing agent, catalyst, purifier, precipitating agent, and as an additive to grease and other materials for pipe thread lubrication.

Zinc dust is said to be a natural enemy of rust and to be highly effective on iron and steel in salt atmospheres and where the painted surface is in contact with brine. Special zinc dust paints can be made to provide unusual durability when used on flue boxes, steam condensers, and other industrial equipment subject to high temperatures.

Methionine Ups Feed Efficiency; Helps Poultry Feathering, Growth

New Laboratory and Field Research Confirms Improvements Obtained by Adding Methionine to Broiler and Turkey Starter Feeds; Benefits Pronounced in Hot Weather

As a result of U.S.I.'s pioneering research, the world has seen methionine transformed in the short space of seven years from a chemical rarity to a practical commodity which is used in tonnage quantities. Until U.S.I. developed its commercial method of synthesis in 1946, methionine was a scarce organic chemical selling for several hundred dollars per pound. When it became available in quantity, the pharmaceutical industry soon uncovered many new therapeutic uses, and its success in this field spurred the use of methionine in other applications.

One of these has been in the manufactured feed industry. Methionine has long been known as an essential sulfur amino acid, necessary for the growth and repair of animal tissue. A great amount of experimental work has been carried out to demonstrate that methionine improves feed efficiency and growth. Its addition as a supplement to animal feeds has been found to be profitable and practical. As a result, methionine is now used by feed manufacturers in every section of the country.

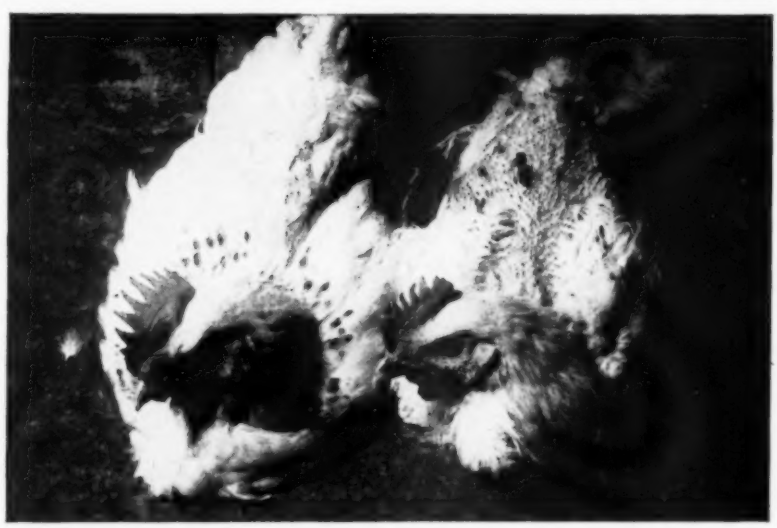
Poultry Among Chief Benefactors

Poultry are among those farm animals that benefit most from additions of methionine to their feed. Recent poultry research reported from a leading university gives added confirmation to the fact that methionine can increase profits in several ways. This

MORE

'3-D' Models of Crystals Easily Built with New Kit

A simple and effective means for visualizing how atoms, molecules, or ions pack together to form various crystalline structures is now available in a new demonstration model kit. Portable and easy to use, the kit consists of a series of transparent plates containing regularly spaced holes into which black or white spheres are placed to represent units within the crystal. Spaces and supporting rods separate the plates and hold the structure rigid. By arrangement of alternate layers and the use of different length spacers, any of the fourteen possible space lattices in the six crystallographic systems can be shown clearly in three dimensional form. Once put together, the crystal model has a slightly exploded appearance, showing the relation of the cleavage and glide planes to the lattice structure, the manufacturer points out.



Feathering can be greatly improved by the addition of methionine to the broiler ration, as this photograph from Broiler Growing shows. The bird on the left came from a group fed one pound of methionine per ton of feed. The bird on the right received no methionine.

CONTINUED *Methionine*

work also reveals that methionine can be used to overcome poor feathering — a common hot weather problem encountered by many poultry growers.

On the basis of several years of tests involving more than 10,000 chicks, it is estimated that from one-half to one pound of methionine, added to each ton of feed, yields the broiler producer from 15 to 30 pounds of additional broilers per ton of feed used. This estimate takes into account the improvement in feed efficiency alone. Additional benefits in increased growth — larger birds in a shorter time — are also obtained.

Methionine Improves Feathering

Definite improvements in feathering were noted as a result of feeding methionine. In one test under field conditions, feather score was improved approximately 25 per cent during hot summer months in birds receiving methionine at the rate of one pound per ton of feed. In other tests under experimental conditions, it was noted that birds not fed methionine were almost completely barebacked. The addition of one pound of methionine per ton of feed produced normal feathering.

Similar Results Obtained in Turkeys

Extensive experiments in adding methionine to turkey starter feeds gave equally beneficial results. Under practical conditions, the addition of one pound of feed grade methionine to each ton of turkey feed, with and without antibiotics, produce a sizeable increase in growth. It is emphasized in the report of this work that the all-vegetable test ration was fortified with the known vitamins and minerals, and that prior to the addition of methionine, the ration already contained "adequate" methionine on a calculated basis.

It is also interesting to note that the growth response obtained by adding methionine to the ration was greatest during hot weather. This makes it possible to assume that free methionine assists the birds in some way to overcome the stresses and strains brought on by hot weather and other factors.

New Reagent Simplifies Moisture Determinations

A new reagent for detecting and measuring traces of water in various substances was recently announced by a chemical firm. The reagent is applicable for anhydrous solvents, paint thinners, dry-cleaning solvents, plasticizers, higher alcohols, gasoline, petroleum oils and greases, and vegetable oils, fats, and waxes.

No heating is required in the procedure. The reagent is simply added dropwise to a given quantity of sample until a blue-green end point is reached. Using the dropper furnished with the reagent, each drop is equivalent to 0.2 mg. of water.

The same procedure can be used to determine quickly traces of water in organic solids which cannot be heated, provided the solids are soluble in butyl alcohol. The test can also be adapted to other products such as powdered inorganic materials, textiles, and fibers, according to the company. The product is said to be useful for plant and field testing, as well as for laboratory testing.

Rhodium Vacuum Coating Offered as New Service

Vacuum-coating of rhodium on conductive and non-conductive materials is now available as a commercial service to technical laboratories and industrial organizations, according to a recent announcement. Rhodium is said to have a high resistance to chemical attack and because of its high reflectivity, is excellent for mirrors and reflecting surfaces which must withstand corrosive atmospheres. When deposited on glass and subjected to baking, rhodium coatings become extremely hard and are ideal for making thin, hard surfaces to resist wear and friction, it is said. Materials coated thus far include microscope slides, mirrors for optical apparatus, reflectors for telescopes, gauges, and glass bearing surfaces.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U. S. I.

A new plastic bearing material is said to require no lubrication, to contain no oil, graphite, or other sealed-in lubricant, to be extremely resistant to chemical corrosion, and to be able to withstand temperatures ranging from —100 to over 400° F. **(No. 950)**

A new solvent-resistant coating for paper, leather, rubber, etc., is described as a specially plasticized, room-temperature curing phenolic resin which yields a flexible, non-tacky, glossy film. **(No. 951)**

To prevent mercury poisoning through skin absorption, a protective cream is available which is said to contain a mercury decontaminant. Cream is claimed to offer protection against coal tar derivatives, dilute acids and alkalis as well. **(No. 952)**

A new protective chemical for aluminum, applied by brushing or dipping, reportedly forms an amorphous mixed metallic oxide coating that provides unusually high corrosion resistance and forms an excellent paint bond. **(No. 953)**

Large, heavy-duty paint rollers, fitted with extra-long handles, are claimed to eliminate ladders and scaffolds from industrial painting, and to handle oil, water, or rubber-base paints on all types of surfaces. **(No. 954)**

Warning labels which can be applied without moistening to glass, metal, wood, plastic, or ceramic containers, are printed on strong, durable cotton cloth coated with silicone, and are available in 36 different wordings, according to the manufacturer. **(No. 955)**

A new chemical-resistant gasket material consists of strips of foamed silicone rubber wrapped in sheets of tetrafluoroethylene resin and is claimed to be effective in chemical and pharmaceutical applications over a wide temperature range. **(No. 956)**

A novel new shaving brush fits the end of any standard size tube of shaving cream, dispenses lather directly through the bristles of the brush. **(No. 957)**

To prevent corrosion in steam condensate systems, a new compound, fed to the boiler in small amounts, vaporizes, depositing a non-wettable protective film in return lines, it is said. **(No. 958)**

A 'spray-can' water repellent for cloth is claimed to repel water without retarding air circulation, to improve wear and wrinkle and crease resistance, and to be suitable for clothing, sails, car tops, awnings, etc. **(No. 959)**

PRODUCTS OF U.S.I.

ALCOHOLS
Amyl Alcohol (Isoamyl Alcohol)
Butanol (Normal-Butyl Alcohol)
Fusel Oil—Refined
Propanol (Normal-Propyl Alcohol)

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof U.S.P., Absolute—200 Proof
Solox*—proprietary solvent—regular and anhydrous

ANTI-FREEZE
Super Pyro* Anti-Freeze
U.S.I. Permanent Anti-Freeze

ETHERS
Ethyl Ether, U.S.P.
Ethyl Ether, Absolute—A.C.S.

ACETONE—A.C.S.

ANSOLS
Ansol* M
Ansol* PR

ACETIC ESTERS
Amyl Acetate—Commercial and High Test
Butyl Acetate
Ethyl Acetate—all grades
Normal-Propyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
Diatol*
Diethyl Carbonate
Ethyl Chloroformate

RESINS (Synthetic and Natural)
Arochem*—modified types
Arodure*—urea-formaldehyde resins
Arofene*—pure phenolics
Aroflat*—for special flat finishes
Aroflint*—room temperature curing phenolic
Araplaz*—alkyds and allied materials
Aropol*—copolymer modified alkyds
Ester Gums—all types
Natural Resins—all standard grades

INSECTICIDE MATERIALS
Allethrin
CPR Concentrates: Liquid & Dust
Piperonyl Butoxide
Piperonyl Cyclonene
Pyrenone* Concentrates: Liquid & Dust
Pyrethrum Products: Liquid and Dust
Rotenone Products: Liquid and Dust

INSECTIFUGE MATERIALS
Indalone*
Triple-Mix Repellents

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-chloroanilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloroanilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

FEED PRODUCTS
Calcium Pantothenate (Feed Grade)
Choline Chloride
Curbay B-G*
DL-Methionine (Feed Grade)
Niacin, U.S.P.
Riboflavin Concentrates
Special Liquid Curbay*
U.S.I. Vitamin B_{12} and Antibiotic Feed Supplements
Vacatone* 40

OTHER PRODUCTS
Acetaldehyde
Caustic Soda
Ethylene
IPC (Isopropyl-N-Phenyl Carbamate)
CIPC
Liquid Chlorine
Metallic Sodium
Methionine (Pharm.)
N-Acetyl DL-Methionine
Nitrocellulose Solns.
Propionaldehyde
Propionic Acid
Sulfuric Acid
Urethan, U.S.P.

*Reg. U.S. Pat. Off.

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers Products Corporation

120 BROADWAY, NEW YORK 5, N. Y. BRANCHES IN ALL PRINCIPAL CITIES

Houbigant Sales Meeting

Houbigant Sales Corp. held its annual sales meeting at Ponte Vedra Club, Ponte Vedra Beach, Florida, from June 25th to July 1.

Pierre Harang, vice-president, congratulated the members of the sales organization on the important part they played in the ever-increasing sales performance of both Houbigant and Cheramy products. Bert Georgi, sales manager, directed the sessions devoted to merchandising and presented the new Fall and Christmas lines. Al Welzel, promotion manager, discussed new advertising and promotional plans.

Annual sales meeting of Houbigant at Ponte Vedra Club, Florida, attended by executives and sales representatives from U. S., Canada and Puerto Rico.

Roerig Purchase Completed

Chas. Pfizer & Co., Inc. completed the final arrangements early this month of acquiring the outstanding stock of the J. B. Roerig Co., leading Chicago supplier of hematinics and other prescription nutritional specialties. Thomas J. Winn, general manager of Pfizer Laboratories, a division of Chas. Pfizer & Co,. Inc., was elected president of Roerig at a meeting of the new board of directors of that company which took place following the Pfizer acquisition.

Other Roerig Officers named by the new board were Herbert Nack, administrative vice-president; T. H. Coulter, vice-president in charge of sales; J. R. Hoegh, controller; Louis M. Timblin, treasurer of Pfizer, treasurer; and E. A. Agostini, secretary.

On the new board of directors of Roerig are Mr. Winn; Mr. Timblin; John J. Powers, Jr., vice-president of the parent company; Mr. Nack; and Mr. Coulter.

Madison with McNeil

Dr. William L. Madison has been appointed manager of the Pharmaceutical development department of McNeil Laboratories.

CSC Appointments

James V. O'Leary has been appointed field sales manager of the industrial chemicals and animal nutrition division of Commercial Solvents, according to W. Ward Jackson, general manager. He has been succeeded as district manager of the Chicago territory by Frank A. Embrey, district manager of the St. Louis sales office.

John R. Post, a CSC salesman since 1947, has become district manager of the St. Louis territory.

Emelin To Leave Schenley

Arthur C. Emelin has resigned as president of Schenley Laboratories effective September 1.

Randolph Named by Calco

C. C. Randolph, Jr., has assumed responsibility for raw material and container purchases for the Calco division, according to W. C. Harmon, Jr., divisional manager of purchases, American Cyanamid Co.

Hewitt, V. P., Evans Research

Dr. Eric J. Hewitt, administrative and research director of Evans Research & Development Corp., was elected a vice-president at a recent meeting of the board of directors. He continues in his present position and will participate in other activities.

Dickinson Retires—Wyeth

Francis L. Dickinson, who has been a Wyeth Laboratories sales representative in Florida since 1935, will retire August 31. He was honored at a dinner on July 31 at the Empress Hotel in Miami Beach, according to Stuart V. Smith, vice-president. Lemuel Hardy, division sales manager at Atlanta, and Wyatt Pope, district sales manager in Jacksonville, joined other Wyeth salesmen in the celebration.

His retirement will be effective the last day of August, but Mr. Dickinson actually relinquished his duties at the dinner and is now taking a month of accrued vacation before going on the retired list.

Griffin Marks 45th Year

O. B. Griffin, salesman for Pitman-Moore Co., last month observed his 45th anniversary with the company. He joined the firm July 6, 1908, spending 2 years in plant operations, after which he took over the territory in Indiana he still travels. Although the size of his territory has been reduced on several occasions, he continued to show gains during 90 per cent of the time.

Because of his outstanding sales performance and achievements throughout the 45 years of service, Mr. Griffin was recently awarded the "Sammy" by the Indianapolis Sales Executives Council.

DR. WILLIAM L. MADISON

DR. ERIC J. HEWITT

O. B. GRIFFIN

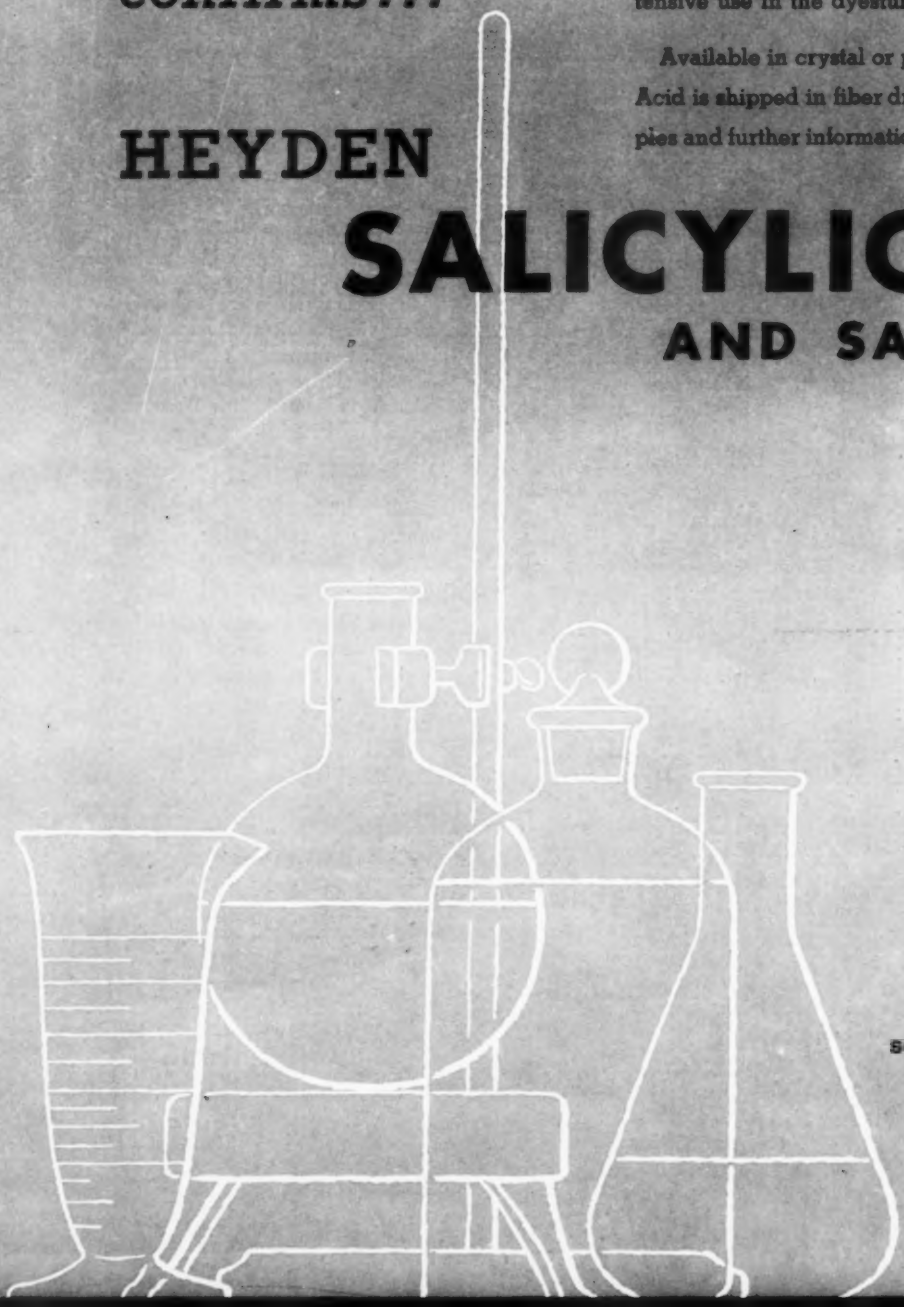
Experience confirms...

HEYDEN SALICYLIC ACID AND SALICYLATES

Heyden Salicylic Acid and its derivatives have always fulfilled the needs of the pharmaceutical and process industries for highest purity intermediates. The U.S.P. grades serve for manufacturing and also prescription purposes.

The technical grade of Heyden Salicylic Acid finds extensive use in the dyestuff, resin and rubber industries.

Available in crystal or powder form, Heyden Salicylic Acid is shipped in fiber drums of 25 to 225 lbs. net. Samples and further information will be mailed upon request.



FOR PRESCRIPTION AND MANUFACTURING USE

SODIUM SALICYLATE U. S. P.
Crystals, Flo Crystals or Powder

METHYL SALICYLATE U. S. P.
(Oil of Wintergreen, synthetic)

ACETYLSALICYLIC ACID U. S. P.
Crystals or Powder
(also Starch Granulations)

PHENYL SALICYLATE N. F.
(Salol)
Granular or Powder

AMMONIUM SALICYLATE N. F.
Crystals

CALCIUM SALICYLATE
Powder

LITHIUM SALICYLATE N. F. VIII
Powder

MAGNESIUM SALICYLATE
Powder

STRONTIUM SALICYLATE N. F.
Powder

SALICYLAMIDE

PARA-AMINOSALICYLIC ACID

SODIUM PARA-AMINOSALICYLATE

Serving Industry Through Finer Chemicals

BENZALDEHYDE • BENZOATES • BENZYL CHLORIDE
BROMIDES • CHLORINATED AROMATICS • CREOSOTES
FORMALDEHYDE • FORMIC ACID • GLYCEROPHOSPHATES
GUAIACOLS • HEXAMETHYLENETETRAMINE
MEDICINAL COLLOIDS • METHYLENE DISALICYLIC ACID
NEOMYCIN • PARAFORMALDEHYDE
PARAHYDROXYBENZOATES • PENICILLIN
PENTAERYTHRITOLS • PROPYL GALLATE • RESORCINOL
SALICYLATES • SALICYLIC ACID • STREPTOMYCIN

FINE HEYDEN CHEMICALS

HEYDEN CHEMICAL CORPORATION
342 MADISON AVENUE, NEW YORK 17, N.Y.
CHICAGO • PHILADELPHIA • SAN FRANCISCO • DETROIT • PROVIDENCE

New P-D Office in Chile

Parke, Davis & Co. is planning to construct a new combination manufacturing laboratory and branch office in Santiago, Chile, where about 125,000 square feet of property has been purchased, according to W. R. Jeeves, vice-president and director of overseas operations.

Hewitt Appointed by P-D

Dr. Marshall I. Hewitt has been appointed editor of professional literature by Parke, Davis & Co., according to W. L. Griffith, manager of the promotion department. His chief responsibility will be the preparation and revision of basic literature on Parke-Davis products.

Reeve, Ass't Treas., Bristol

Robert M. Reeve, formerly acting head of the finance department, Bristol Laboratories, has been elected assistant treasurer, according to Frederic N. Schwartz, president. At the same time he was named head of the finance department.

Max Appointed by Gair

Dr. Keith Max has been appointed assistant to Norman F. Greenway, vice-president in charge of the folding carton division, Robert Gair Co. He will be in charge of the paperboard production of the folding carton division.

Hastie, V. P., Hilton-Davis

Ross M. Hastie has been elected divisional vice-president of the Hilton-Davis Chemical Co., a division of Sterling Drug Inc., according to James F. Thompson, vice-president of Sterling. He has been associated with Hilton-Davis for 17 years.

Stults Celebrates 55th Year

Elias D. Stults, president of Welch, Holme & Clark Co., celebrated his 55th year with the company on August 1. The office force gave an informal luncheon in his honor at the company office last month, because Mr. Stults is now on vacation.

Parfums Weil Office in N. Y.

Parfums Weil Paris has opened offices in New York at 1 West 52nd St. Gaston de Havenon, well-known in the perfume industry, will be the sole distributor in the United States and will be able to make delivery on September 1st. The line consists of perfumes, toilet waters and bath oils.

DR. LAWRENCE C. WEAVER

Joins Pitman-Moore

Dr. Lawrence C. Weaver, research pharmacologist, has been added to the Pitman-Moore Co. research staff, according to K. F. Valentine, president.

Lakeside Products in France

Representatives of the Roussel Corp., one of the largest French pharmaceutical firms, recently visisted Lakeside Laboratories in Milwaukee to complete negotiations for the sale of Lakeside products in France.

Etienne Patte, directeur secretaire general of Roussel, and Daniel Senac, president and directeur general de L'Institut de Serotherapie Hemopoietique, met with Evan P. Helfaer, Lakeside president.

Grady Dupree

Grady Dupree, Coty district manager for the Southeastern district, died in his sleep Thursday night, July 17. He was 59 years old. A registered pharmacist, he joined Coty in 1929 as a salesman, and in 1949 was appointed district manager, supervising a territory which covered Louisiana, Arkansas, Tennessee, Mississippi, Alabama, Florida, North and South Carolina and Georgia.

No successor has been appointed as yet to Mr. Dupree's post.

Frank B. Fisk, M. D.

Dr. Frank B. Fisk, who retired as control director of the Pitman-Moore Co. in 1952 after 39 years of service, died suddenly on July 10 at the home of his daughter in New York. He had just returned from a year in Europe.

Always active in the affairs of the American Pharmaceutical Manufacturers' Association, he served the Industry and the Association as a member of the Combined Pharmaceutical Contact Committee from its inception more than 25 years ago, and from 1937 to 1952 acted as secretary of that committee.

F. Semler Dieterich

F. Semler Dieterich, who joined the Mennen Co. in 1933 as advertising manager and rose to the vice-presidency in charge of merchandising, died at his home in Upper Montclair N. J. recently following a long illness. He was 57 years old.

Rowland O Lohrberg

Rowland O. Lohrberg, president of Henry K. Wampole & Co., died suddenly July 21 while attending an executive committee meeting of the company. He was 56 years old.

After entering the pharmaceutical business in Omaga, he joined the staff of Sharp & Dohme in 1926, rising to the position of director of domestic sales during 21 years of service. He joined Wampole as assistant to the president in 1947 and became president in 1951.

James A. Reilly

James A. Reilly, a director and executive vice-president of the Colgate-Palmolive-Peet Co., died July 24 at his home in East Orange, N. J., following a heart attack. He was 49 years old.

He began working for Colgate in 1926, serving in various sales capacities, becoming a vice-president in 1944, executive vice-president in 1952, and a director early in 1953.

Mr. Reilly is survived by his mother, his wife, a daughter, Judith Ann, and seven brothers.

Wendell K. Van Slyke

Wendell Keith Van Slyke, 43, assistant vice-president in charge of production for Campana Corp., died suddenly on July 22, at Ames, Iowa. Surviving are his widow, Marguerite Gates Van Slyke; two daughters, Roxanne and Carla; a sister, Mrs. Frances L. Lowenberg; and a brother, Raymond.

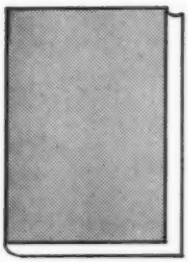
Dr. Hilton O. vonRosenberg

Dr. Hilton O. vonRosenberg, manager of the department of veterinary medicine at Parke, Davis & Co., died July 25 at Harper Hospital, Detroit, following an illness of more than a year. He was 55 years old.

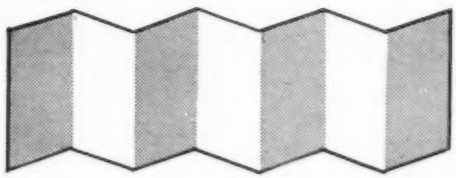
Dr. vonRosenberg joined Parke-Davis at Kansas City, remaining there until 1943 when he was transferred to the firm's New Orleans branch. He assumed his latest position with the company in 1945.

He is survived by his widow, Mrs. Monte vonRosenberg; a daughter, Monte Jean; and three brothers.

These two attractive bottles are available in either clear or frosted glass. They can be supplied plain or with fired-on ceramic labels.
Style 682
Made in 5 sizes—from ⅛ oz. to 4 oz.
Style D62
Made in 9 sizes—from ½ dram to 8 oz.
682 HAND LOTION
D 62 Eau de Cologne
CARR-LOWREY GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART



Trade Literature



Magnesium Trisilicate Data

J. T. Baker Chemical Co., Phillipsburg, N. J., has issued a Product Data Sheet on magnesium trisilicate, U. S. P., as well as a chronologically arranged bibliography of the product.

Bulletin on Isopropylans

Robinson, Wagner Company, 110 East 42 St., New York 17, has issued Product Bulletin No. 45 on the Isopropylans which are described as "the most recent and important addition to a growing list of new lanolin derivatives developed by Robinson-Wagner research." The six-page bulletin gives specifications and other pertinent data on the Isopropylans, as well as information on the incorporation of these products in various types of cosmetics with formulas.

Sodium Perborate Bulletin

Buffalo Electro-Chemical Company, Buffalo 7, N. Y., has issued Bulletin No. 45 on sodium perborate, used in various cosmetic preparations. The product contains 10 per cent of active oxygen by weight.

Book on Aldehydes

A new 36-page book describing aldehydes has been issued by Carbide and Carbon Chemicals Company, 30 East 42 St., New York 17. The book, which discusses in detail the fourteen aldehydes sold by the Company, gives uses and suggested applications, physical properties, shipping data, specifications, test methods, constant-boiling mixtures, and a list of selected references to aldehydes in technical literature.

Alsop Equipment Catalog

The Alsop Engineering Corporation, 800 Messmer St., Milldale, Conn., offers a new 32-page catalog written especially for plant personnel. It contains photographs, diagrams, and comprehensive data on the entire Alsop line of stainless steel liquid processing equipment.

Booklet on Demineralizers

Barnstead Still & Sterilizer Co., 119 Lanesville Terrace, Forest Hills, Boston 31, Mass., has issued a new bulletin, No. 126, on mixed-bed demineralizers. The bulletin explains in text and pictures how a mixed-bed demineralizer operates in producing high-purity water by the ion-exchange method.

Cosmetic Formulations

A comprehensive 88-page manual of cosmetic formulations such as oil-in-water emulsions, water-in-oil emulsions, pastes, molded products and protective creams has been issued by Atlas Powder Company, Wilmington, Del. Also covered are typical drug formulas: ointments and bases, transparent emulsions, suppositories, elixirs and cough syrups.

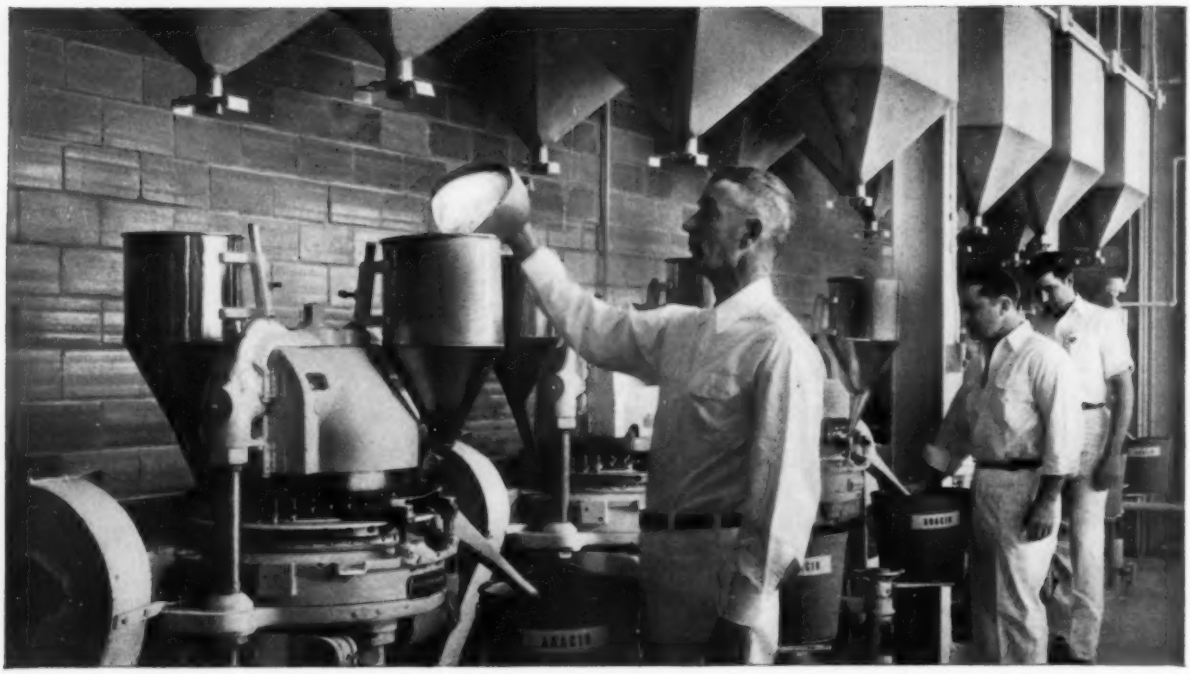
Clearly presented, the formulation descriptions include ingredients, percentages used, process conditions and comments on the resulting products. Five pages of tabular data augment the emulsifier selection section. Printed in two colors, the spiral-bound booklet is generously illustrated with sketches.

Bulletins on Gums

Morningstar, Nicol, Inc., 630 West 51 St., New York 19, has issued Technical Service Bulletins No. G-101 on gum arabic, and G-102 on gum karaya. The four-page illustrated bulletin on gum arabic, and the eight-page illustrated bulletin on gum karaya are crammed with information of great value to the users of these products.

Ethoxymethylene Malonate

Kay Fries Chemicals, Inc., 180 Madison Ave., New York 16, has issued a Technical Data Bulletin on diethyl ethoxymethylene malonate. The bulletin contains properties and specifications, data on packaging and toxicity, suggested uses, and a synopsis of work reported in the literature. Primary interest in the product has been its possible use in the synthesis of several antimalarials, being used to form a quinaline ring compound. Similarly it may be used in the synthesis of pyrimidines.



2,500,000,000 Anacin Tablets per year

. . . that's the production capacity at the huge Whitehall Pharmacal Company plant in Elkhart, Indiana. A battery of nine Stokes Model BB-2 rotary tabletting presses now turns out 1,350 Anacin Tablets per press per minute. Eight more Stokes BB-2 presses now producing other Whitehall products can be called into service at any time to produce a total of 23,000 Anacin Tablets per minute, or 2,500,000,000 per year, on the basis of one eight-hour shift.

Whitehall's familiar symbol is clearly embossed on each Anacin Tablet as it passes through the Stokes press. Finished Anacin Tablets are accurate in weight, uniform in density, attractive in appearance.

Economical, long run, high speed production up to 1,900 tablets per minute is typical of Stokes rotary tabletting presses. A minimum of labor and servicing is required to operate these presses at maximum efficiency, a feature of special importance to plants located at considerable distances from service facilities and parts depots.

For production by the hundred or the million, Stokes has the right machines and proved techniques to help you realize practical and profitable manufacture. Stokes Advisory Service is available, at no obligation, to help solve such problems as tablet formulas, punch and die design, and improved operating procedures.

F. J. STOKES MACHINE COMPANY,
PHILADELPHIA, PA.

STOKES

STOKES MAKES Plastics Molding Presses / Industrial Tabletting and Powder Metal Presses / Pharmaceutical Equipment / Vacuum Equipment / High Vacuum Pumps and Gages / Special Machinery

Management Forum

by Francis Chilson
INDUSTRIAL CONSULTANT

Rampant Unionism

The major national unions have instituted an intensive drive for additional members. In some areas strong-arm squads are active again and workers are coerced into joining unions under the threat of having their brains beaten out if they fail to comply. In one instance I witnessed three thugs come into a plant under construction and line up a gang of pipe fitters against the wall threatening them with mayhem if they failed to join up. One of the pipe fitters with more guts than the others slipped away from the group and went to his locker and got a pistol. Coming back he routed the goons who ran out of the premises like scared rabbits.

The unions are working particularly on the married men, using threats against the men and their families if they fail to join up. In one instance the wife of a driver of a mail truck belonging to a plant which was on strike was told by telephone if she didn't force her husband to quit the job she'd find him some morning in the morgue.

Along with an increase in strong-arm tactics is an increase in feather-bedding, outright loafing, slowdowns and inter-craft squabbling about work classification, priority and seniority.

What disturbs me is that business men are apparently so afraid of the unions that they don't dare to organize a counter attack upon them. If business men fail to fight back at the unions they will in a very short time surely lose control of their enterprises. I have talked with factory people all over the United States and I am convinced that the majority of workers don't like being unionized. But they are looking for support and leadership. I was told when I was in England last year that if American management didn't organize a fight against vicious unionism, American industry in ten year's time would be as completely dominated by the unions as British industry is. I scoffed at the idea but from the way things are shaping up my English friends will have been proved to be right, and long before ten years have passed.

No one denies the right of workers to organize to protect their own interests. Labor leadership can be and sometimes is intelligent and constructive rather than destructive. Every business man recognizes the right of workers to form unions, but no worker and no union has a right to interfere with production which has given us all a standard of wages and of living conditions unparalleled in the history of the world. It is as much in the interest of labor union leaders to stop vicious practices as it is management's—if they can only be made to realize it.

Factory Architects

From time to time because of their costly errors I have taken a blast at architects who have had no previous experience in designing factories. Many of these men are competent architects, who, under competent supervision could turn out superb examples of modern industrial architecture. But when the architect is left to his own devices and when the management is so thoroughly sold on the architect that they will subordinate the interests and opinions of their own engineers and production people to those of the architect, building costs and operating expenses are bound to increase tremendously. To show you how far off base an architect can get I refer you to an article published in the Journal of the American Institute of Architects by Minoru Yamasaki, which was brought to my attention by my good friend Joe Wafer of Industrial Chemical Sales Corporation.

Mr. Yamasaki criticizes existing industrial plants for lack of attractiveness, proper employee facilities, air conditioning, ventilation and sound control. In these criticisms Mr. Yamasaki is certainly right. He also criticizes modern factory buildings for being too large on the ground that vast distances tend to "overpower" the worker. And he proposes to solve the problem by breaking up the factories into relatively small units set in attractive surroundings!

In other words, Mr. Yamasaki apparently doesn't give a damn about construction costs and even less about operating costs.

Small buildings always cost from 30 per cent to 60 per cent more per square foot to build than large ones, because of the increased area of wall space in relation to floor space that is inherent in all small buildings. Operating costs are infinitely higher in small buildings than in large ones because of the need for additional supervision, maintenance, material handling etc.

My view, and it is supported by years of extensive experience and observation, is that buildings should be built as large as the economics of the situation will allow, and that interior partitions between operating departments should be reduced to the minimum, and eliminated entirely where possible. Right now I am building a plant which has no partitions at all between its several manufacturing and packaging departments. A large open area like this is quieter than partitioned areas because there aren't any nearby walls for sound to reverberate against. The problems of lighting, ventilation, fume control and dust collection are simplified in a large unified area. A vast amount of space is saved through the elimination of access aisles required by partitioned areas. For the same reason material handling is made faster and more flexible.

I agree with Mr. Yamasaki that a plant should be attractive inside and out; that it should be also safe and comfortable inside. But I have known of a number of firms that went haywire on external plant embellishment because of an illusion that a flashy looking plant has substantial advertising value. Indeed, I have known some instances where workers' facilities were minimized in order to provide a flashy exterior.

It is my belief that a factory building, regardless of how it is designed, has no more, if not less, advertising value than a good, well-placed billboard. The billboard is at least specific and its message can frequently be changed. In any event, the public rarely if ever identifies the products with the manufacturer's name. One of my clients felt so strongly on this point that when his new plant was built he wouldn't permit the grounds to be defaced by a billboard nor would he even permit the company name to be placed on the building. Yet, that building is located along one of the Eastern parkways and it was acclaimed the year it was built by the New Jersey State Institute of Architects as being the most beautiful industrial building in that state.

I have always been strongly in favor of attractive plants set in attractive surroundings, but for one reason only and that is to improve the morale of the people operating the plant.

Vertical Conveyors

For years there has been a need for vertical conveyors not only in multi-storied buildings but in single-story buildings as well. Since case conveyors must be pitched at an angle of not more than 30° a lot of space is wasted beneath the ramps created by the conveyors. In single-story construction where it is desired to use one case sealer for a variety of case sizes the amount of space killed by the classification conveyors can be considerable. In one plant I had eight storage or classification conveyors feeding one case sealer. Mixed cases are conveyed from the lines to a sorting point where the cases are sorted by size on to the storage conveyors. This requires an operator. Had the vertical conveyors been available then it would have been possible to have kept the storage conveyors overhead, connected directly with packaging lines and the sorting operator could have been eliminated. For your information Standard Knapp Corporation makes these conveyors with automatic intakes and discharges. They are adjustable so that when the lines are switched to different size cases the vertical conveyors can also be adjusted.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

New Bulletin

New Bulletin illustrates U. S. Model B-2 Semi-Automatic Vacuum Filler. Continuous filling is fast, accurate and easy on the operator. For liquids and semi-liquids. Handles containers up to 13" high and 4-3/8" dia. Can fill direct from drum. Replaces hand filling. Portability makes ideal standby on peak loads. Request "Model B-2 Bulletin," U. S. Bottlers Machinery Co., 4015 N. Rockwell St., Chicago 18, Ill.

Morehouse Mill

A new processing mill less than 2 feet high especially adapted to laboratory processing and control work is announced by Morehouse Industries of Los Angeles, manufacturers of the well-known Morehouse mills used for grinding and processing pharmaceuticals, cosmetics, grease, foodstuffs and a wide variety of other products. The new "midget" mill is the smallest in the Morehouse line, stands 23¼" high, is 8¼" in diameter and weighs only 41 lbs. Like all Morehouse mills, it operates on the principle of a Carborundum stone revolving at high speed against a stationary Carborundum stone. Material to be processed is fed between the stones.

The mill is an ideal installation for laboratory development work, Morehouse engineers point out, since formulation and control work can be done quickly and the product taken directly to a larger mill for volume production. Throughout rates vary from one to three gallons per hour depending upon the material.

A double bearing spindle alignment assures positive positioning of the rotor and stator components and clearance between the processing stones can be varied in 1/1000" stages positively and accurately by a sim-

Double Capacity

At Lower Cost

Material falls from hopper into MIKRO-PULVERIZER, custom-built to meet Serutan's exacting specifications. After grinding and blending it is air-conveyed to MIKRO-COLLECTOR on floor above.

MIKRO-COLLECTOR operates at 330 cfm and handles 350 grains per cu. ft. of air. Horizontal screw and small vertical elevator deliver filtered material to classifier at right.

MIKRO'S INTEGRATED SYSTEM has again proven itself to be both a money-saver and a time-saver in the combined functions of grinding, blending and dust control.

At the SERUTAN plant in Newark, N. J., this unified method (made possible by the incorporation of the MIKRO low pressure air conveying system) has out-moded batch handling by providing a continuous, automatic flow of material from a No. 2 DH MIKRO-PULVERIZER on one floor, to a MIKRO-COLLECTOR* on the floor above.

RESULTS:

100% increase in production . . . reduced cost due chiefly to elimination of batch handling . . . clean, dustless operation . . . improved working conditions . . . full product recovery . . . absolute protection of product against contamination.

This high-efficiency push-button operation steps up production by 100% for Serutan, but it can be engineered to meet almost any production quota on a wide variety of materials. It will pay you to investigate its possible application in your own plant set-up. Write now for information and descriptive literature.

*Patents Applied For by H. J. Hersey, Jr. and Pulverizing Machinery Company

PULVERIZING MACHINERY COMPANY
40 Chatham Road • Summit, New Jersey

PRESERVE OUR HERITAGE: FAITH, FREEDOM AND INCENTIVE

MIKRO-PULVERIZER (FINE) -ATOMIZER (ULTRA FINE) -COLLECTOR (100 PER CENT)
REG. U.S. PAT. OFF.

2513

DAY RO-BALL SIFTERS

....Protect Product Quality

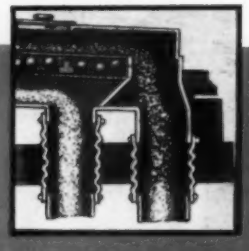
You can meet the highest standards of quality and assure yourself of economical, trouble-free operation with DAY RO-BALL SIFTERS for all scalping and sifting.

You get thorough separation of overs and thrus plus matchless accuracy in maintaining particle size because DAY RO-BALL SIFTERS employ the exclusive Super-Active Ball Cleaning Device.

Scores of rebound points on the mesh retainer screen insure even distribution of vibration over the entire screening surface. Result . . . the screen stays clean and free passage of through material is guaranteed.

Only DAY can offer this time-tested assurance of top performance. Learn the details . . . write today for free folder.

1146 Harrison Ave., Cincinnati 22, Ohio



DAY Super-Active Ball Cleaning keeps the screen clean and assures passage of through material.

DAY

THE J. H. DAY COMPANY, CINCINNATI 22, OHIO

INCORPORATED • FOUNDED 1887

ple hand wheel control. A highly polished processing chamber permits easy cleaning so that several laboratory batches can be run through without danger of contamination.

Power is supplied by a ¾ HP motor operating on 110 volts. No lubrication is required since all motor and mill bearings are lubricated and sealed at the factory.

Details can be obtained by writing Morehouse Industries, 1156 San Fernando Road, Los Angeles 56, California.

New Air Centrifuge Announced

A new machine for continuous dust removal and particle recovery from air and gas has been announced by the Superior Separator Company, Hopkins, Minnesota. Called the Superior Air Centrifuge, this unique machine works on a new patented impelled centrifuge principle.

The air centrifuge operates with high efficiency in the very small particle size ranges. It is continuous and non-varying over an unusually wide variety of temperature and humidity conditions—temperatures ranging up to 200 degrees higher than standard filters.

The compact machine is adaptable to plant air flow systems wherever industrial processes involve machines such as grinders, pulverizers, dryers, roll

stands, purifiers, solvent extractors, mixers, open conveyors, blenders, etc. It has already been production tested in various industries, ranging from food to pharmaceuticals, from abrasives to fertilizers.

It stands just over seven feet high and is forty-two inches in diameter. It is made of steel and operates economically, with only one main moving part.

A small portable model air centrifuge is also being introduced. This chrome and plexi-glass model is adaptable to laboratory work and production analysis, or to commercial production where small amounts of air are handled. Both machines will be distributed nationally by Superior Separator Company.

Operating Description of Air Centrifuge

Dust-laden air enters tangentially, at relatively high velocity. It is then accelerated by the motion of the perforated rotor. When the air reaches same speed as surface of the rotor, it moves into the rotor through the perforations. The taper of the rotor is such that the course of least resistance is downward.

Some dust or solid particles separate from the air and remain in the space between the rotor and housing. These solids drop to the bottom of the housing and are swept by the cleanout disc to the solids outlet, which is a vertical rotary air lock constructed as an integral part of the machine.

A system blower propels the air upward to the clean air outlet tube. Since the diameter of the tube is smaller than the diameter of the rotor where the air enters, the pattern of the moving air is a funnel-shaped vortex. This gives increasing angular velocity to the air stream . . . a much higher velocity than is possible with any other collector, and free of turbulence.

The finer particles subjected to this increasing centrifugal force are separated from the air and passed through the rotor perforations into space. Here, they are removed from the Centrifuge along with the heavier particles initially thrown off.

The clean air moves through outlet tube into the bonnet, from which it is discharged.

New Bulletin

The Patterson-Kelley Co., Inc., East Stroudsburg, Penna. announces a new 16-page general catalog covering hot water storage heaters and heat exchangers. The bulletin will be of value to engineers in restaurants, institutions, pharmaceutical, cosmetic, food and chemical processing plants, textile plants, hotels, office buildings, power plants and wherever heat exchange equipment is used. It covers more than a dozen types of hot water storage heaters and heat exchangers.

Included are horizontal and vertical hot water storage heaters, instantaneous water heaters, convertors, condensate coolers, dishwasher boosters, fuel oil heaters and instantaneous suction heaters for viscous fluids.

Tables enable selection of the correct equipment for given operating condition. For example, tables on P-K Instantaneous Water Heaters give selection data on 2-, 4- and 6-pass U-tube heaters having capacities to 66,500 gallons per hour at steam pressures of 0, 5 and 10 psig, with water temperatures from 40° to 100°F inlet and 80° to 220°F outlet. Typical examples demonstrate use of the tables.

To aid still further in the selection of proper heat-transfer equipment, four additional bulletins are offered covering applications on which more specialized information may be required.

FITCH and PNEUMATIC

BOTH designed TO KEEP TROUBLE OUT OF YOUR HAIR!

View of Pneumatic Close-Coupled bottling lines in production of FITCH hair preparations at new plant of Grove Laboratories, Inc., St. Louis, Missouri.

Grove Laboratories have been "expanding", so to speak, since they started business at Paris, Tennessee in 1889. In 1949 they acquired the famous FITCH hair preparations and added this business to their flourishing line of proprietory cold remedies.

To enlarge production capacity, Grove built a brand spanking new plant of modern design and has occupied it since 1952. As part of a progressive program to step up and *smooth out* production, Grove installed four Pneumatic Close-Coupled bottling lines to handle its FITCH output. The last word in automatic high speed cleaning, filling, capping and labeling equipment, these Pneumatic units deliver the goods without delay and with the very minimum of adjustment or attention. Down to the last detail they are designed to establish and maintain new high standards of "lower cost per container" performance. And they're doing it — day in and day out — here and elsewhere, in American's foremost factories.

PNEUMATIC SCALE CORP., LTD., 70 Newport Ave., Quincy 71, Mass. *Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.*

★ PNEUMATIC

Packaging and Bottling Equipment

Copies of Catalog No. 5 may be obtained from Patterson-Kelley Co., Inc., 367 Warren Street, East Stroudsburg, Penna.

Carton Stapler

The International Staple & Machine Company, 801 Herrin Street, Herrin, Illinois, has developed a new 100% automatic carton-stapling machine for closing center slotted corrugated or fibre cartons . . . of the type used for packaging canned beer, bottled beer, canned foods, glass packed foods and similar products.

Designed to fit into existing conveyor systems, the stapling machine is built to include a conveyor belt that receives the filled carton from main conveyor system prior to the stapling operation.

As the carton is conveyed to stapling position, it hits a trip-switch which actuates a device that automatically centers the carton at exactly the right spot for the proper cross-stitch stapling of the top flaps.

While the carton is being centered, it continues to move forward on the conveyor belt until it actuates a second trip-switch which causes an automatic mechanism to first close the carton's end flaps . . . then its side flaps.

As soon as the side flaps are closed, two automatic retractable anvil stapling heads lower to the carton top, and drive staples at predetermined positions along the center slot.

After staples are driven, forward limit switches mounted inside each stapling head are actuated. This causes the anvils to retract into each stapling head . . . the stapling heads to rise from the carton top . . . and the automatic centering device to open.

The carton then proceeds on the stapling machine's conveyor belt to the main conveyor system.

This automatic stapling machine is air operated, and will staple from 800 to 1000 cartons an hour. It is adjustable to handle cartons from 5″ to 11″ high, 8″ to 12″ wide, and 11″ to 17½″ long.

Colton Liquid Filler

A new series of multiple nozzle liquid filling machines has been added to the extensive Colton line of filling and pharmaceutical machinery, according to an announcement by Kenneth B. Hollidge, executive vice president of Arthur Colton Company, Division Snyder Tool & Engineering Company, 3400 E. Lafayette Ave., Detroit 7, Michigan.

The new series of fillers is designed to meet production needs ranging from the filling of fractional capacity units such as artists' paint pans holding about a third of an ounce, up to large capacity units, such as jars and bottles containing several ounces.

Various combinations of capacity are available. Model 100 Colton Multiple Liquid Filler is a six-nozzle machine with a maximum fill of .33 ounce at 180 pans or jars a minute. No. 104 has four nozzles and fills 3.9 fluid ounces at 120 jars a minute. Model 106 has six nozzles and fills 2.9 fluid ounces into 150 jars a minute. No. 108 has eight nozzles and fills 1.3 fluid ounces at approximately 200 jars a minute. Other models and various fill capacities are available with up to 12 nozzles.

An important feature of these machines is that they can be equipped to fill the same material from all nozzles or a different material, or a different color of material from each nozzle.

Containers may be fed through the machine or across the front, depending upon production line conditions in the user's plant. Standard models are

for bench installation but bases can be supplied. Frame spacers provide adjustment for different heights of containers. Five-gallon hopper is standard equipment.

Multiple hoppers and water-jacketed hoppers, electrically heated and thermostatically controlled, are available.

All models are driven by geared head motors through a one-turn clutch, operated by a pedal control.

Special attention has been given to making these units quick and easy to disassemble for cleaning which should take about half an hour.

Pebble Ice

The "pebble" ice made by a new machine, although similar to crushed ice is dry and non-mushy, ideal for fountain drinks and food displays.

This machine, called the Ajax Pebble Ice Maker, is available in three capacities—200 lbs., 400 lbs., 800 lbs., per day. It is said to be one of the smallest, most compact made, taking less than 1 sq. yd. of floor space. Its 39″ height is ideal for under-counter installations.

Highly simplified, the machine has just three moving parts, thus insuring long, trouble-free operation.

Performance features include an automatic cut-off switch which controls ice overflow no matter what

(Continued on page 230)

A SIGN OF GOOD JUDGMENT

Packaged on S&S FILLING MACHINES

Famous **NAMES** *in* **DRUG** *and* **COSMETIC HISTORY**

Year after year more famous names join the ranks of manufacturers depending on Stokes & Smith Filling Machines for fast, accurate packaging.

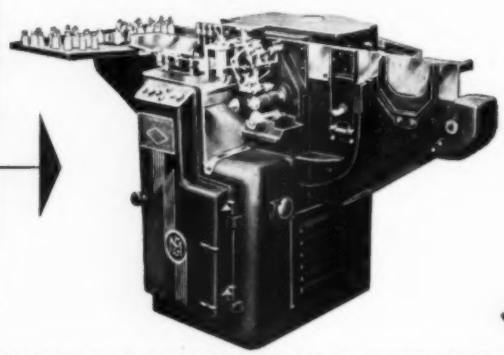
Powders, granules, pastes and creams are filled into jars, boxes, envelopes or cans with equal efficiency. The S & S Universal Filler fills by gross-weight, packing, or volumetric measurement; speeds up to 50 per minute depending on product and package.

S&S FILLING MACHINES are engineered to give continuous, every-day operation with only minor maintenance. There is an S & S Filler to meet your exacting requirements. Write today for illustrated Bulletin #4962.

HIGH SPEED
Precision Labelling at Low Cost with "BANKS" LABELLER

Vials, jars and bottles are labelled on a "Banks" up to 10,200 per hour. The "Banks" features clean labels with no excess glue, accurate registration, "No Bottle – No Label" device, and Variable Speed Range.

Write for your reference copy of "Banks" Catalog.



STOKES & SMITH CO.

4912 SUMMERDALE AVE., PHILADEPHIA, PA.

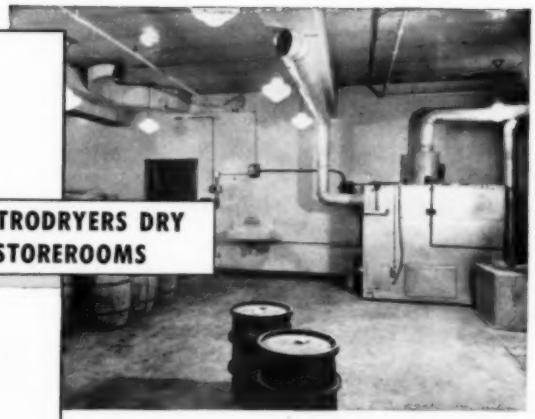
Pacific Coast: SIMPLEX PACKAGING MACHINERY, INC., 534 - 23rd AVE., OAKLAND 6, CALIF.

fmc

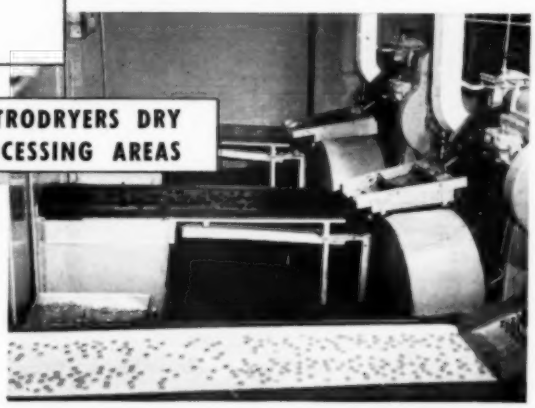
SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

TRADE MARK

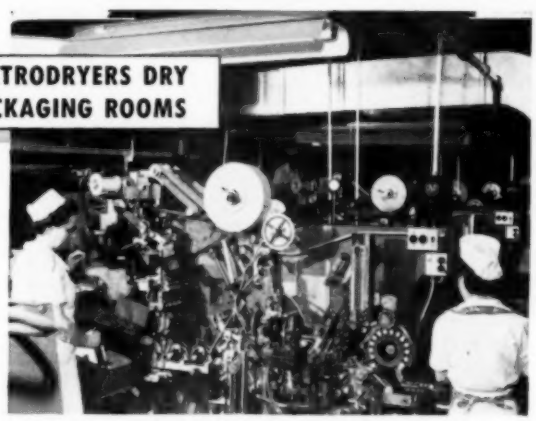
Why let WETth in . . . when you have to take it out



LECTRODRYERS DRY STOREROOMS



LECTRODRYERS DRY PROCESSING AREAS



LECTRODRYERS DRY PACKAGING ROOMS

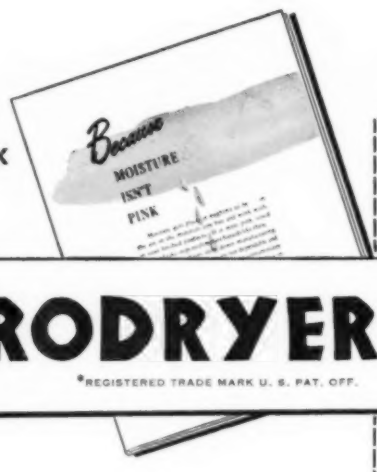
WETth—moisture you can't see or feel—bucks production schedules from every angle. Here's how:

Air in storerooms is loaded with moisture. Raw materials soak it up; finished products deteriorate rapidly under its influence. Lectrodryers* remove that moisture, safeguarding your products and saving you money by making it unnecessary to employ other protective measures.

Unwanted moisture in manufacturing areas slows down and stalls production—causes finger-marking and corrosion of highly polished metal surfaces—breaks down electrical insulation. Lectrodryers hold humidities at uniformly low levels, letting work proceed at a fast clip, regardless of outside weather conditions.

Are you wondering what WETth is doing to your production? Mail the coupon today for evidence of how other manufacturers are using Lectrodryers to eliminate their troubles with unwanted moisture.

MAIL THE COUPON FOR THIS FREE BOOK



LECTRODRYER

*REGISTERED TRADE MARK U. S. PAT. OFF.

Pittsburgh Lectrodryer Corporation
309 32nd Street, Pittsburgh 30, Pa.

Send "Because Moisture Isn't Pink" to

Name_____

Title_____

Company_____

Address_____

(Continued from page 227)

type of storage container used. According to the company, the new machine wastes less than three gallons of water per day.—Ajax Corporation of America, 2509 Washington Ave., Evansville, Ind.

New Modular Industrial Building

The Ferber Company, Hackensack, N. J., industrial builders, have just printed a brochure entitled "The Modular Method For Lower Industrial Construction Costs." The Ferber Company refers to it as their "Moduleered" building and explain that all units, and all their components, are precisely standardized. The standard office module and the standard plant or warehouse module can be assembled in any numerical combination or pattern to form the desired building.

According to Ferber, their research has proved that a modular bay of 30′ x 40′ with a clear height of 15′ provides maximum use, flexibility and economy. This is the key to the "Moduleered" building. From the exterior finish to the interior equipment, every item is of a predetermined size and quality. However, both the "Moduleered" office and industrial bays are designed for alternate use of materials. For example, walls may be of brick, aluminum, concrete block or a combination of these. Other items may be added or omitted to suit the requirements of the customer.

The Ferber "Moduleered" building is suited for one-story buildings from 10,000 to 500,000 square feet. Future expansions can be made by adding any number of standard 30′ x 40′ modular units. The brochure also explains that the building is less expensive because of low material costs due to efficient design and use of stock materials, and the peak labor efficiency developed through repetition of familiar work patterns. Complete construction and mechanical drawings in the Ferber files enables construction to start immediately with materials from stock.

The Ferber "Moduleered" building can be used to advantage for manufacturing or warehousing in practically every phase of American industry. For a free copy of this brochure write to the Ferber Company, 16 Johnson Avenue, Hackensack, N. J.

Conveyor

A new general-purpose conveyor, the Model TL Versaveyor, especially adapted to loading and unloading operations is now being marketed by the Belt Corporation, Orient, Ohio.

According to Belt engineers, one of the outstanding advantages of the new equipment is the way it can be stored on a busy shipping dock in a minimum of space, and yet remain ready for immediate use. The TL Versaveyor is simply up ended and placed vertically against the wall or in an out-of-the-way corner.

The new conveyor is constructed on a heat-treated aluminum alloy frame capable of sustaining a 300 pound distributed load. Unit load capacity has been established at 150 pounds.

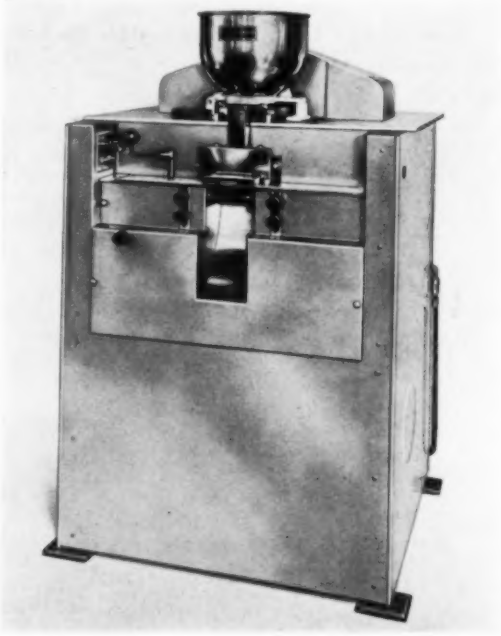
Model TL weighs approximately 235 pounds and is 10 feet long. The unit is powered by a ¾ H.P., 1725 electric motor. Early users have reported the TL especially fitted for the shipping room, bus depots, car loading ramp, and similar transportation applications.

The Belt Corporation manufactures three other industrial conveyors as well as a line of agricultural materials handling equipment.

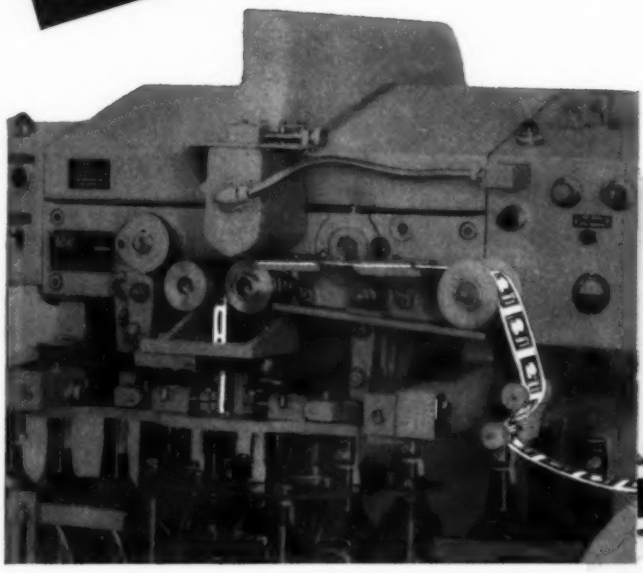
Strip Packaging

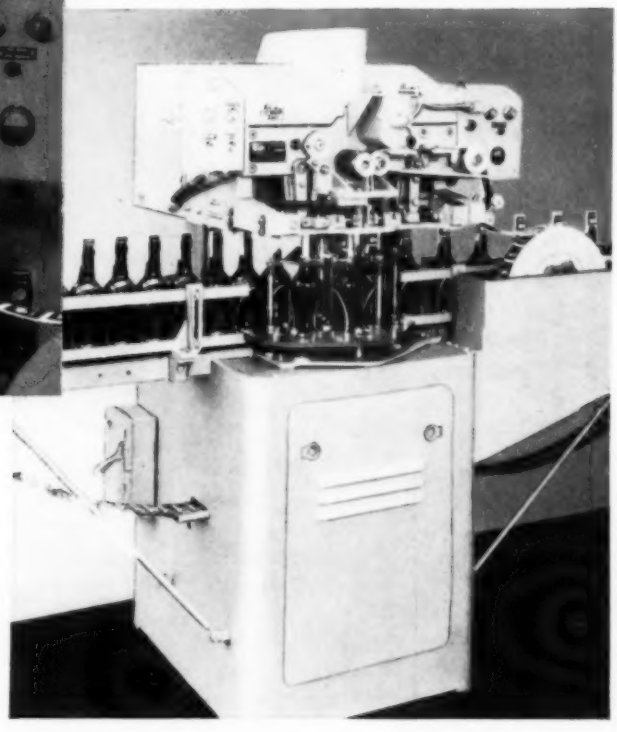
The new Formapak Machine, introduced by Brown Bag Filling Machine Co., Inc. of Fitchburg, Massachusetts forms and fills heat seal packets of small, individual servings or samples, at remarkably low cost. The Formapak machine manufactures packets from a roll of heat sealing paper and fills them in one operation.

Free-flowing products, from a few grains up to ½ ounce, fill accurately. Certain heavier materials may fill with a larger load. The operating speed ranges from 40 to 100 packets per minute, depending chiefly upon filling volume and free-flowing characteristics. Packets can be produced from a minimum size of 2″ x 2½″ to a maximum of 4½″ x 4½″. Adjustments to any size packet within these limits are simple and confined to a change in the plunger only. Temperature and pressure, accurately controlled to insure a strong and uniform seal, can also be changed while the machine is in operation to suit the type of paper used and the coating. Formapak can be equipped with other filling heads for products not entirely free-flowing or inclined to be somewhat sluggish. Or Brown Bag will furnish the machine alone with heat-sealing units to form the packets, allowing the purchaser to add a feeding attachment of his own design to meet his particular requirements.



NOW! The WORLD Automatic Cellulose BANDING MACHINE





How it works — The cellulose banding material, in roll form is fed into position over the container, then cut to precise length. The container is indexed by starwheel feed. The band is opened by combined mechanical and vacuum action and transferred from a plunger over the bottle neck and cap. Operation is fully automatic. Quick changeover to other sizes of bands and bottles is readily effected.

What it does— J. C. Miller, Plant Manager of Miracle Power Division, The AP Parts Corporation writes: *"In the first eight months of operation our World Automatic Cellulose Banding Machine applied bands to 940,488 eight ounce Boston round bottles with 25mm caps, at a speed of 65 per minute.*

"Before placing this machine in operation we had four to five people installing the bands by hand. High cost and fluctuating production made this operation so unsuccessful we were seriously considering changing to some other type of seal. Now, with this banding machine, our cost has been greatly reduced and we are very well satisfied with the performance and accuracy of the machine."

for high production, uniform quality, low cost application of cellulose bands to glass containers of the shapes and sizes normally handled by automatic cappers, fillers and World Labelers.

One more slow, costly, laborious hand operation is now eliminated. Banding is done at packaging line speeds. World Banders are available for 75, 150 or 225 containers per minute.

For complete information on automatic application of plain bands of whatever diameter, printed bands and precisely spotted bands, get in touch with

ECONOMIC MACHINERY COMPANY

58 FREMONT STREET • WORCESTER 3, MASSACHUSETTS

DIVISION OF GEO. J. MEYER MANUFACTURING COMPANY • CUDAHY, WISCONSIN, U. S. A.

WORLD'S

Which of these Fine Chemicals Do You Use?

Look *first* to Merck . . . for a dependable supply of more than 1,000 fine and medicinal chemicals . . . for continuous research that brings you new, improved, and profitable chemicals . . . for valuable technical assistance in solving your manufacturing problems.

Research and Production for the Nation's Health

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

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Readers' Questions

Liquid Egg Shampoo: *We should be much obliged to you if you could give us information or formula for manufacturing a liquid egg shampoo. Helsingfors.*

I think something on the following order will meet your need:

Sodium fatty alcohol sulfate paste	45
Magnesium stearate	2
Polyvinyl alcohol (10 per cent solution)	6
Lanolin	1
Cetyl alcohol	2
Glyceryl monolaurate	2
Water and dehydrated egg, to make	100

Make a paste of the magnesium stearate with the fatty alcohol sulfate and then incorporate the other ingredients. It is advisable that the product contain at least from 0.5 to 1.5 per cent of dehydrated egg. It is preferable that this be rehydrated with water before use.

Liquid Lanolin: *We are interested in knowing how to put lanolin in a permanent liquid-type form to be used for the skin. Please send us any instructions and information you might have for making lanolin into liquids and creams. Los Angeles.*

There are several methods for putting lanolin in liquid form but most of them are covered by patent. Thus, according to U. S. Patent 2,498,727, lanolin can be brought into solution forming substantially transparent liquids by mixing the lanolin with isopropyl palmitate or isopropyl stearate. However, it is fairly easy to make lanolin creams by combining lanolin with petrolatum and mixing the resulting product with water. For example, a mixture of equal parts of lanolin and petrolatum will emulsify approximately twice its weight of water.

A typical lanolin cream which takes advantage of this property can be made along the following lines:

Lanolin	35.0 per cent
Petrolatum	45.0 " "
Spermaceti	5.0 " "
Water	15.0 " "

Melt the petrolatum, lanolin and spermaceti together, cool to about 115° F., add perfume and incorporate the water by vigorous mixing at the same temperature. About one per cent of perfume must generally be used to cover the odor of lanolin.

Liquid and Cake Makeup: *As subscribers to your magazine for many years, we would be very thankful to you if you could give us some formulas for making a "liquid make-up" and a colored "cake cream." Bruxelles.*

These products consist essentially of modified pigmented powder creams and liquids containing of higher proportion of fatty or oily ingredients. For example, a preparation that could be used as a basis for liquid make-up consists of:

Glyceryl monostearate	6.5 per cent
Oleic acid	3.0 " "
Mineral oil	24.0 " "
Lanolin	1.0 " "
Titanium dioxide	10.0 " "
Color, water-soluble	sufficient
Triethanolamine	1.5 " "
Water	54.0 " "

In the above preparation, the titanium dioxide is added last.

To make a pigmented powder cream, something on the following order will serve:

A.

Isopropyl palmitate	1.0 per cent
Stearic acid (triple pressed)	12.0 " "
Sorbitan monostearate (Arlacel 60)	2.0 " "
Polyoxyethylene sorbitan monostearate (Tween 60)	1.0 " "

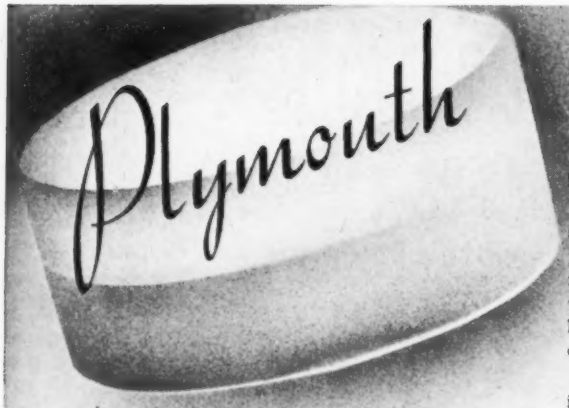
B.

Sorbitol (70 per cent solution)	3.0 per cent
Propylene glycol	12.0 " "
Titanium dioxide 1:4	10.0 " "
Iron oxide	1.0 " "
Water	58.0 " "
Preservative	sufficient

C.

Perfume	sufficient

Preparation: Bring (A) to 90°C. Bring (B) to 95°C. Add (B) to (A) slowly and with constant agitation. Perfume at 45°C. If not smooth and uniformly dispersed, pass through homogenizer or ointment mill. Pack. This cream goes through several stages during the mixing operation, during which it may appear to separate. Continue the agitation, nevertheless, and a stable, smooth cream will result.



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Advancing Therapy

Dramamine for Postoperative Nausea

It has been thought, notes J. L. Armer (*J. Oral Surg.*, July, 1952, p. 225), that postoperative nausea following general anesthesia is caused by disturbed equilibrium. Therefore, when dimenhydrinate (Dramamine) was released, it was felt that it might prevent this condition; and therefore tests were made of its postoperative effect. The drug was administered both orally and parenterally. In those instances in which dimenhydrinate was administered orally, 100 mg. was given the patient at a time corresponding with the two meal hours preceding the operation. In those instances in which the dimenhydrinate was administered parenterally, 50 mg. was injected when the anesthetic was given. The initial experiment indicated that the use of dimenhydrinate orally, parenterally or in the form of suppositories reduces the incidence of postoperative nausea.

Potassium in Diabetic Coma

Since January, 1948, say J. H. Crampton, G. W. Mellinger and J. L. Palmer (*Diabetes* 2:1, 1953) insulin, fluid therapy, and supplemental potassium therapy have been used in the treatment of 53 patients between 5 and 65 years of age with diabetic coma. Up to 700 or more units of insulin were given during the first two hours; this dose was determined by clinical evaluation of the patient and was equal to half the admission value for blood sugar. Rehydration was accomplished with isotonic sodium chloride solution given intravenously. Additional insulin was given at the fourth hour if the blood sugar had not fallen to one-half of the original level. If the urinary output was observed to be adequate, dibasic potassium phosphate was given by stomach tube and in fluids given orally beginning at the fourth hour. Potassium was given intravenously only if the patient was unable to retain it when given by mouth or if symptoms of hypopotassemia occurred; in only five of the authors' patients this route of administration was considered to be necessary. Some patients received as much as 48 Gm. of dibasic potassium phosphate. The average amount administered was 18.6 Gm. Three illustrative cases are described. No fatalities occurred among the 53 patients, in contrast to 3 deaths in a similar group of 32 patients who had been treated before the inauguration of supplemental potassium therapy. The investigators feel that the free use of potassium salts has been a significant factor in the absence of death, and that the efficacy of their plan of treatment thus has been demonstrated.

Vitamin E in Gravitational Ulcers

The effect of vitamin E in 28 patients with gravitational ulcers has been studied by M. Lee (*Brit. J. Dermat.* 65:131, 1953). All of the patients were under treatment for at least three months; most of them for six months. They were given 400 mg. of vitamin E daily in four equally divided doses after meals. Full dosage was continued for one to two months after healing took place. The dose was then reduced to 200 mg. daily for a further two to three months. There were no side-effects which could be attributed to vitamin E. As a control group, 29 comparable patients were treated with dummy tablets. In addition to treatment with vitamin E or dummy tablets, vigorous local treatment was applied. Of the patients receiving vitamin E, 82 per cent reached complete healing within periods ranging from 4 to 31 weeks (average 11.3 weeks), compared with 83 per cent of those receiving dummy tablets, in whom the time necessary for complete healing varied from 2 to 32 weeks (average 14.6 weeks). The relapse rate in the two series was also comparable: eight relapses among fout patients in the vitamin E series, and eight relapses in seven patients receiving dummy tablets.

However, when the patients were divided into two groups—those with a definite history of post-partum or post-operative thrombosis, and those without a history of thrombosis—there was evidence of a beneficial effect of vitamin E in the former group. Thus, 12 out of 14 patients in the thrombotic group who received vitamin E, who had completed three months' treatment, healed in an average of nine weeks, compared with 9 out of 12 patients in this group receiving dummy tablets who healed in an average of 15.8 weeks. In the non-thrombotic group, 11 out of 14 patients receiving vitamin E who had completed three months' treatment, healed in an average of 12.9 weeks, compared with 15 out of 17 patients in this group receiving dummy tablets who healed in an average of 14.3 weeks. It is suggested that vitamin E is worth trying as an ancillary to local therapy in patients with post-thrombotic ulcers.

Diamox—New Oral Diuretic

It would be highly desirable say C. K. Friedberg, R. Taymor, J. B. Minor and M. Halpern (*New England J. Med.* 248:883, 1953) to obtain a diuretic agent that could be given orally and yet act as effectively as parenterally administered mercurial diuretics, without producing significant toxic manifestations. The xanthine diuretics, chemically related uracil derivatives and other preparations of mercurials have been ineffective, inconstant in effect or associated with unpleasant side actions or toxicity. Another approach to the development of a satisfactory oral diuretic is based on the observation that inhibition of carbonic anhydrase activity in renal-tubule cells not only impairs the tubular secretion of hydrogen ions but also diminishes the retention of sodium, a major objective of diuretic therapy in heart failure.

In the studies made by Friedberg and his colleagues, the carbonic anhydrose inhibitor, 2-acetylamino-1, 3, 4-Thiadiagole-5-sulfonamide, known as Diamox (Lederle Laboratories, New York City), was employed as a diuretic for oral administration in 26 patients with congestive heart failure. Diamox prevented the secretion of an acid urine and promoted the excretion of sodium and potassium. Eighteen patients demonstrated diuresis, weight loss and clinical improvement after the oral administration of Diamox that compared favorably with those after a mercurial diuretic given parenterally. Toxic side actions were unimportant in the patients studied and those that did ocur did not necessitate discontinuance of the drug.

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As a result of extensive studies Z. M. Bacq and his colleagues (*Science* 117:633, 1953) have come to the conclusion that, at the present time, *beta*-mercaptoethylamine (cysteamine) seems to be the most practical substance to protect mammals against ionizing radiations. It remains active when given after irradiation, if the liver has been protected. It has remarkable therapeutic action against radiation sickness in cancerous patients locally irradiated. Thus, a single intravenous injection of 200 mg. cysteamine is often sufficient to eliminate, in 24 hours, the symptoms of radiation sickness (e.g. nausea, vomiting, diarrhea, general weakness) observed in cancerous patients treated with ionizing irradiations.

Other observations show that mercaptoethylamine is a molecule of great biological interest, and its study is being actively pursued.

Bulk Laxatives

On May 9, 1953, at the New York Academy of Sciences, during a conference on the physiology and pharmacology of the colon, M. L. Tainter and O. H. Buchanan presented data on the bulk laxatives. They pointed out that the first materials used as bulk or colloid laxatives were the naturally-occurring hydrophilic plant gums such as acacia, karaya, tragacanth, bassora, agar, Irish moss and psyllium. These materials have considerable water-combing power and form viscous colloidal solutions of the aqueous contents of the gastrointestinal tract. By their water-retaining properties such colloidal solutions tend to increase the bulk of the intestinal contents and promote peristalsis by distension of the intestinal wall. Such agents lubricate and protect the intestinal mucosa and favor the formation of stools of soft consistency.

During the past ten years the synthetic colloidal agents, methylcellulose and sodium carboxymethylcellulose, have been investigated and used as bulk laxatives. Numerous feeding experiments in animals and man have shown these synthetic materials to be nontoxic, non-allergenic, not absorbed by the intestinal mucosa, not degraded by intestinal enzymes or bacteria, and not to interfere with intestinal absorption of the fat-soluble vitamins. The synthetic colloids possess additional advantages over the natural gums in that they have a higher degree of chemical uniformity and can be pressed readily into tablet form which many patients prefer to the older gum powders or granules.

During the past two years combinations of synthetic methylcellulose with the naturally-occurring gums of psyllium have been studied in an attempt to utilize the optimum therapeutic merits of these two different types of bulk laxative agents. A properly balanced formulation should combine the advantages of the sponge-like absorption and retention of water by the psyllium gums with the formation of a demulcent, viscous colloid solution by the dispersion of the methylcellulose in the liquid contents of the intestines. Quantitative clinical studies in human subjects with such a formula have been made.

Dandruff Treatment

The control of dandruff, says E. W. P. Thomas (*Practitioner* 170:309, 1953) is a tedious business that requires perseverance with suitable local applications combined with shampooing at frequent intervals. He stresses the importance of applying the remedy to the scalp itself, and not merely into the hair, where it can do little good. For this reason scalp lotions, though convenient and not messy, are as a rule not nearly so effective as a water-miscible ointment, which can be well rubbed into the surface of the scalp. The following is satisfactory for the average case, and should be applied uniformly to the whole scalp with the finger-tips at bedtime, two or three times a week at first, and the scalp washed thoroughly next day:

Oil of cade	**1.80 cc.**
Sulfur, precipitated	**1.00 Gm.**
Salicylic acid	**0.65 Gm.**
Emulsifying ointment, B. P., to make	**31.00 Gm.**

As the dandruff lessens, a lotion such as the following can be substituted for the ointment two or three times a week, and the scalp need not be washed each time:

Mercuric chloride	**110.0 mg.**
Salicylic acid	**2.6 Gm.**
Castor oil	**1.2 cc.**
Acetone	**14.0 cc.**
Alcohol, to make	**114.0 cc.**

In addition, the ointment should be applied about once a week and followed next day with a shampoo.

On the whole, soapy shampoos, such as green soap, soap flakes or a tar soap, are preferable to the sulphonated alcohols which comprise most proprietary shampoos. The latter are excellent detergents but are too degreasing for some scalps. Likewise, spirit shampoos are occasionally irritating. The patient's hairbrush and comb should be washed daily to avoid re-inoculation of scales. Mothers with dandruff should tie up their hair in a scarf or wear a cap when nursing the baby, as there is reason to believe that dandruff from the mother may play a part in some cases of infantile eczema.

Trevisin—New Antibiotic

According to S. Spicer (*Antibiotics & Chemother.* 3:254, 1953), while testing different media with freshly isolated strains of *Mycobacterium tuberculosis* of human origin, a contaminating colony was noted on one of the seeded plates. Surrounding this colony was a wide, clear zone of growth inhibition bordered by a ring of enhanced growth of the bacilli, typical of the action of some antibiotics. In pure culture, the organism resembles *Micrococcus tetragenus* (Gaffkya tetragena) in that it is a coccus dividing in two planes. It differs from it by being rather large, gram-variable, not encapsulated, nor virulent for white mice; 1 ml. of a heavy suspension of a 24 hour culture injected intraperitoneally does not cause illness or death in the animals. The active agent derived from it is referred to as trevisin.

The general characteristics of the active principle (antibiotic) of the filtrate or crude concentrate derived from this organism are as follows: 1. It is quite stable, retaining its activity for several weeks at refrigerator temperature. 2. Heating for 15 minutes in water bath at 60 C. does not have any deleterious effect on it. Heating for 15 minutes at 75 C. lowers its titer of inhibition, but does not destroy it completely. 3. It does not act in an acid environment. It manifests its activity best at *p*H 7.5. 4. Neither the filtrate nor the crude extract are toxic to white mice; 1 ml. amounts injected in raperitoneally, or subcutaneously, having no ill effect on the animals. 5. The filtrate, as well as the crude concentrate, are nonhemolytic. 6. The action on the test organisms seems to be bactericidal, rather than bacteriostatic, especially on *Mycobacterium tuberculosis*, as shown by the absence of growth on the plates on long incubation. 7. The outstanding characteristics of this new antibiotic, manifested even in the crude stage, are its lack of toxicity, failure to hemolyze red blood cells, and its bactericidal powers.

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Cosmetic Metallic Stearates

According to P. Newton (*Chem. Prod.* 16:97, 1953) the metallic stearates most commonly used in cosmetic and pharmaceutical practice are those of calcium, magnesium, zinc and more recently, lithium. These materials are commonly known as "cosmetic metallic stearates" to distinguish them from those used in paints and other industries. They are all fine white powders of high specific volume, good adhesion to the skin and good covering powers, and are prepared, in general, by double decomposition between the appropriate inorganic salt and sodium stearate.

Undoubtedly the principal use of cosmetic metallic stearates is in the manufacture of powders which may be divided arbitrarily into face, toilet and medicated powders. The general use of these products has steadily increased over the past thirty years and their manufacture has become a specialized branch of the industry. Thus, in the production of face powders, the cosmetic metallic stearates provide excellent adhesion and water-repellent power. They also give a "bloom" to the powder. The amount of metallic stearate incorporated in face powders ranges from 5 to 7 per cent. The following basic formula is typical:

Cosmetic metallic stearate	40	parts
Calcium carbonate (Precip.)	125	"
Kaolin	125	"
Talc	75	"
Zinc oxide	75	"
Starch	50	"
Titanium dioxide	30	"
Light magnesium carbonate	10	"
Pigment colors	2–3	"
Perfume	2½	"

Talcum powders are used principally to prevent chafing and to absorb perspiration while imparting a pleasant, cooling effect. Thus talcum powders consist mainly of talc which imparts good "slip" properties together with smaller proportions of precipitated chalk and cosmetic metallic stearate for their absorption and powers of adhesion respectively. Boric acid is sometimes incorporated for its mild antiseptic properties and zinc stearate is recommended for the same purpose although in baby powders lithium stearate is to be preferred since it is considered to be less irritant. A basic formula for talcum powder is as follows:

Cosmetic metallic stearate	5.0	parts
Talc	84.5	"
Calcium carbonate (Precip.)	10.0	"
Perfume	0.5	"

Talcum powders for special purposes such as after-shave powders and baby powders usually contain a mild antiseptic. A suitable basic formula is as follows:

Cosmetic metallic stearate	5.00	parts
Talc	64.50	"
Calcium carbonate (Precip.)	10.00	"
Starch	10.00	"
Boric acid	10.00	"
Perfume	0.25	"

Except for certain after-shave powders these preparations are seldom colored and the perfume should have a clean fresh note. Closely related to talcum powders are medicated dusting powders in which zinc stearate is of particular value since it combines mild antiseptic properties with good powers of adhesion and water repellency, thus ensuring that the powders remain on the skin forming a protective water-resistant covering.

Newton notes that metallic stearates are used in the manufacture of creams, principally as auxiliary emulsifying agents. Calcium, magnesium and zinc stearates are used for water-in-oil emulsions and lithium stearate is used for oil-in-water emulsions. The general procedure is to heat the cosmetic stearate in cosmetic paraffin oil to about 120° C. when gelling will take place; the gel is cooled to about 70° C. and the other oil-soluble constituents are stirred in. A solution of the water-soluble constituents, also at about 70° C., is then incorporated and the stirring is continued until the product is cool.

About 1 per cent of magnesium stearate may be added to cream shampoos to impart opacity. In addition, metallic stearates find use in insect repellent products. Thus, one of the most effective insect repellent creams is simply a paste composed of 30 per cent magnesium stearate and 70 per cent dimethyl phthalate prepared by thoroughly mixing at room temperature until a smooth paste is formed. Such a paste is quite stable and its high phthalate content ensures adequate protection against midges and other insects. It has been claimed that an improved product is obtained by employing a mixture of zinc and magnesium stearates as shown below:

Dimethyl phthalate	200	parts
Magnesium stearate	30	"
Zinc stearate	70	"

Amine Soap Shampoos

In a paper presented at the May 15, 1953 meeting of the Society of Cosmetic Chemists, H. E. Wassell observed that recent trends in hair shampoos indicate a growing tendency to return to soap-based products, modified to meet present-day customers' requirements. The chemical and physical properties of the ethanolamine soaps make them particularly attractive and effective for the modified soap shampoo. For example, triethanolamine oleate provides a good mild base, with a low pH, for making a shampoo. Monoethanolamine oleate provides superior detergency and lathering properties in hard water. Better results are obtained with combinations of the amines. Mixtures of fatty acids for making the soaps also yield better results. These points are illustrated in the following basic shampoo formula:

Coconut oil fatty acid	210	parts
Oleic acid	282	"
Triethanolamine	149	"
Monoethanolamine	61	"
Propylene glycol	282	"

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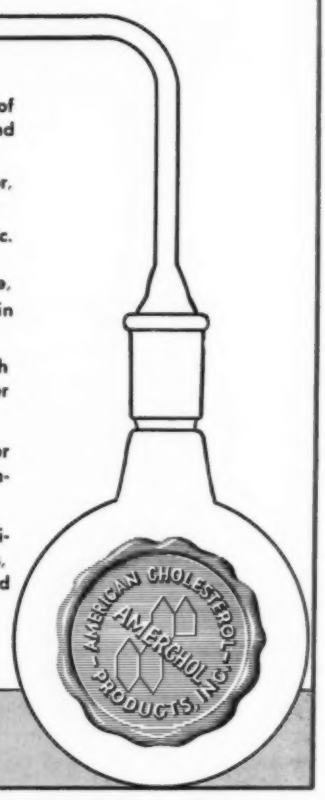

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Patent Thoughts and Trends

*by Thomas Cifelli, Jr.**
PATENT ATTORNEY

DRUGS VS. COSMETICS

No, there is no battle going on between these two groups of products, nor between the industries involved. Their relationship still appears to be as close as it ever was in many ways. Nevertheless, candor requires one to meet the facts, and in one respect it is believed that these two industries could not be much farther apart. That respect is in their use of research.

The drug industry has been characterized in recent decades by a progressive and intensive use of research. Hardly anyone at or above the adolescent stage in life is unaware of the striking medical results of this research, mainly in the field of antibiotics and specific chemicals for various ailments.

All this time, however, the cosmetic industry, as a whole, has failed to keep step. While there have been some elements in the cosmetic industry which can be cited as outstanding exceptions to this condition, it is believed beyond question that the vast majority of the units in the industry just do not use adequate research, qualitatively and quantitatively speaking.

Many reasons are advanced for the failure of the cosmetic industry to be more research-minded. Doubtless many are valid. But, practically all of those reasons could have been used by the drug and other industries which have made extensive use of research. We are inclined to forget that the large organizations such as Bell, Westinghouse, Edison, Merck, American Cyanamid, Parke-Davis, etc., were not always large and successful.

Perhaps no better vantage point showing the difference between the attitude of the drug and cosmetic industries towards scientific research exists than in watching the unfolding patents obtained as a result of that research. The conclusion is inevitably reached that not only is much more research, proportionately, conducted by the drug people, but the research is on a sounder scientific basis. It is rare to find a patent in the drug field which is not presented in a competent manner to the Patent Office or which shows that the scope of the invention has not been worked out in a reasonably complete manner in the laboratory and tested clinically.

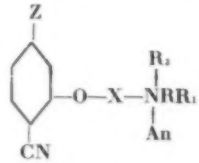
On the other hand, one often encounters the situation in the cosmetic field where what amounts to a mere rough idea of means of attaining a desired result is thought sufficient as not only the *basis of* but in fact the *entire* patent disclosure. When such misinformed people are advised of the need for meaty data they invariably remark that so-and-so got a broad patent on nothing more. Besides probably being incorrect such an attitude doesn't help because whatever may have been the case in years past the fact is that today one is being economically unwise to take a long shot and try to obtain a patent in the U. S. A. on a skimpy disclosure.

Specific illustrations of the point under discussion are always more effective than mere statements. Unfortunately, in patent matters such illustrations tend to be boring. We cannot, as advertisers of products do, utilize specimens of femininity such as Rita Hayworth to prove our points. It may be because we have our noses too close to the grindstone that we have failed. For, come to think of it, why couldn't Miss Hayworth serve as an illustration of a patentable combination, as distinguished from a mere aggregation of elements, which is not patentable. I believe there are none who would argue that such as Miss Hayworth, while possessing only the elements possessed by women in general, are nevertheless so combined as to give a most unusual and superior result.

Returning to the conventional, run-of-the-mill illustration, I do believe the cosmetic industry might find it in its own self-interest to copy the research and patent techniques of its sister industry. In this connection, I think it appropriate to call attention to one of several recent patents issued to Sterling Drug inventors. These patents are U. S. 2,642,429, 2,642,432, 2,642,434-2,642,437, inclusive. These patents all deal with 2,4-substituted benzoates or benzonitriles, which together with quaternary ammonium salts formed by them, have been found to possess pharmaceutical properties, either as anesthetics, analgesics or in ganglionic blocking activity. Naturally, the widest protection was desired. Rather than making some broad statements backed up by the grand total of one, maybe two, maybe three examples and then finding out that the Patent Office would not grant the desired protection, here is what the disclosure of U. S. 2,642,437 encompasses:

First, a statement setting forth the general formula of the compounds and the use in question:

The quaternary ammonium salts of our invention have the general formula



where Z is nitro, amino, alkylamino or hydroxyalkylamino, X is a lower alkylene radical, NRR_1 is a tertiary-amino radical, R_2 is a lower alkyl radical or a benzyl radical and An is a non-toxic anion. These compounds of our invention have useful pharmacological properties, such as ganglionic blocking activity.

Next, a statement showing what Z, X, R, R_1, R_2 and An mean.

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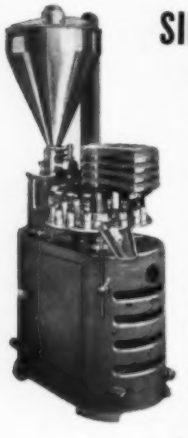

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alkylene radical designated as X has preferably two to four carbon atoms and has its two free valence bonds on different carbon atoms. Thus, X includes such examples as $-CH_2CH_2-$, $-CH_2CH_2CH_2-$,

$$-CH_2\underset{|}{C}H\ (CH_3)$$

$-CH_2CH_2CH_2CH_2-$, $-CH_2CH(CH_3)CH_2-$, and the like. The tertiary-amino radical shown above as NRR_1 comprehends dialkylamino radicals where R and R_1 are lower alkyl groups, alike or different, and each alkyl group having one to six carbon atoms, such dialkylamino radicals including dimethylamino, diethylamino, ethylmethylamino, diisopropylamino, ethyl-n-propylamino, di-n-butylamino, di-n-hexylamino, and the like. Further, the tertiary-amino radical designated as NRR_1 encompasses saturated N-heteromonocyclic radicals having five to six ring atoms, illustrated by examples such as 1-piperidyl; (lower alkylated)-1-piperidyl such as 2-methyl - 1 - piperidyl, 3-ethyl-1-piperidyl, 4-methyl-1-piperidyl, 2,6-dimethyl-1-piperidyl; 1-pyrrolidyl; (lower alkylated) -1-pyrrolidyl such as 2-methyl-1-pyrrolidyl, 2,5-dimethyl-1-pyrrolidyl; 4-morpholinyl; and the like. In the above formula, when Z stands for lower alkylamino, the lower alkyl radical (designated as R_3 below) has preferably one to six carbon atoms, including such radicals as methyl, ethyl, n-propyl, n-butyl, isobutyl, n-amyl, 2-amyl, n-hexyl, and the like. When Z represents lower hydroxyalkylamino, the lower hydroxyalkyl radical (designated as R_2 below) has preferably two to six carbon atoms, including radicals such as 2-hydroxyethyl, 2-hydroxypropyl, 3-hydroxypropyl, 3-hydroxy-2-methylpropyl, 3-hydroxy2,2-dimethylpropyl, 2-hydroxybutyl, 4-hydroxybutyl, 3 - hydroxyamyl, 5 - hydroxyamyl, 6-hydroxyhexyl and the like. R_3 when representing lower alkyl has preferably one to six carbon atoms including such radicals as methyl, ethyl, n-propyl, n-butyl, isobutyl, n-amyl, n-hexyl, and the like. The non-toxic anion, designated above as An, which can be any anion, for instance, chloride, bromide, iodide, sulfate, benzene-sulfonate, para-toluenesulfonate, and the like, has no appreciable pharmacological activity of its own in the high dilutions at which the quaternary ammonium salts as a whole are effective. In particular, the anions contribute nothing to the ganglionic blocking activity which resides solely in the remainder of the molecule.

Then, directions are given for the preparation of the benzonitriles, i.e., of the precursors of the final compounds. These directions take up more than 4 full columns of the printed patent.

Then are given 6 detailed examples with tables giving data on 38 other specific compounds. Perhaps it will be of interest to reproduce part of Example 1 and its accompanying table:

4-nitro-2-(tertiary-aminoalkoxy) benzonitriles

Preparation of the intermediate 4-nitro-2-(tertiary-aminoalkoxy) benzonitriles is illustrated by the following alternative procedures, all of which involve alkylation of 4-nitro-2-hydroxybenzonitrile or a metal salt thereof with a tertiary -aminoalkyl halide, or, stepwise, with a haloalkylating agent such as a haloalkyl paratoluenesulfonate to produce a 4-nitro-2-(haloalkoxy) benzonitrile which is then treated with a secondary amine to form the desired 4-nitro-2-(tertiary-aminoalkoxy) benzonitriles.

Procedure (a).—To a warm solution of 82.0 g. of 4-nitro-2-hydroxybenzonitrile and 1000 ml. of absolute ethanol was added a solution of 11.5 g. of sodium in 500 ml. of absolute ethanol. To the resulting deep carmine-colored solution was added 74.5 g. of 2-diethylaminoethyl chloride (the distilled free base can be conveniently replaced by the equivalent amount of 2-diethylaminoethyl chloride hydrochloride and an additional equivalent of sodium ethoxide), the mixture was refluxed with stirring for five hours, filtered while hot and the filter-cake was washed thoroughly with absolute ethanol. The combined filtrates were evaporated in vacuo, the residue was dissolved in ethyl acetate and the solution was filtered. To the filtrate was added an excess of 20 per cent ethereal hydrogen chloride solution. The resulting precipitate of 4-nitro-2-(2-diethylaminoethoxy) benzonitrile hydrochloride was collected and recrystallized several times from absolute ethanol-ether. The yield of purified material was 112.0 g. (85 pr cent), M. P. 193.2-194.6° C. (cor.).

Anal.—Calcd. for $C_{12}H_{17}N_2O_3HCl$: Cl, 11.83; N_D, 14.02. Found: Cl, 11.75; N_D, 1402.

N_D stands for total nitrogen as determined by the Dumas method.

Conversion of the above hydrochloride into the corresponding base was accomplished by dissolving the hydrochloride in water and precipitating the base by addition of solid potassium carbonate. The precipitated base, 4-nitro-2-(2-diethylaminoethoxy) benzonitrile, which was obtained in 97 per cent yield from the hydrochloride, crystalized from n-heptane in large, pale yellow leaflets, M. P. 104.5-105.5° C. (cor.).

Anal.—Calcd. for $C_{12}H_{17}N_3O_3$: C, 59.30; H, 6.51; N_{BA}, 5.32; N_{NO_2}, 5.32. Found: C, 59.43; H, 6.58; N_{BA}, 5.28; N_{NO_2}, 5.00.

N_{BA} stands for basic amino nitrogen as determined by titration with perchloric acid in glacial acetic acid solution.

N_{NO_2} stands for nitro nitrogen as determined by titration with standard titanous chloride in glacial acetic acid solution.

Actually, there are additional factual statements but the ones already noted are believed to be sufficient.

To make the illustration complete an example of a typical patent in the cosmetics field should now be cited as an exhibit of what not to do. However, that would really not serve any useful purpose and will be dispensed with.

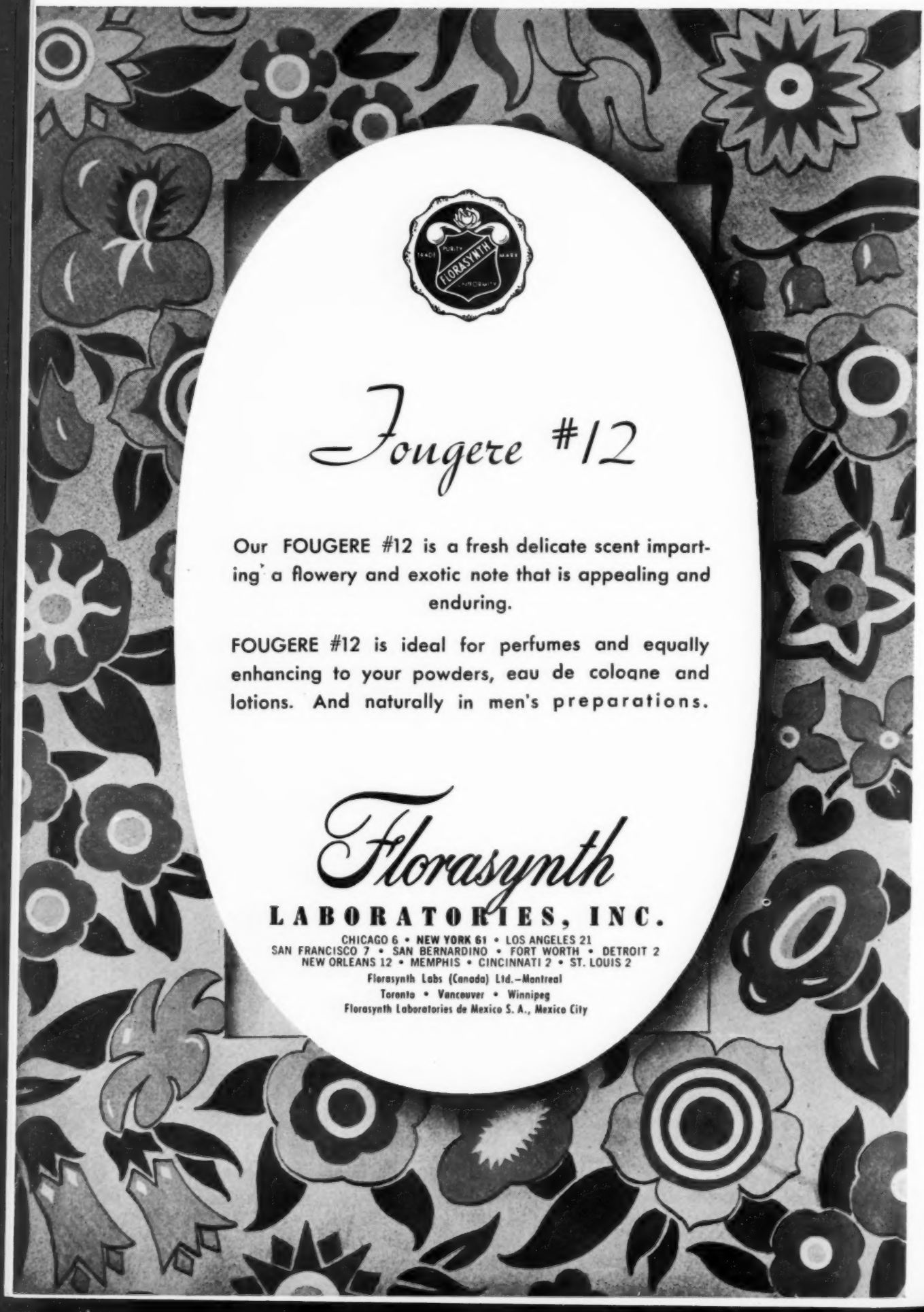
n	NNR_1	M. P., °C. (cor.)	Formula	Analyses, Percent N_{BA} Calcd.	N_{BA} Found	N_{NO_2} Calcd.	N_{NO_2} Found
3	$N(C_2H_5)_2$	53.6-55.0	$C_{14}H_{19}N_3O_3$	5.05	5.04	5.05	4.92
2	NC_5H_{10}[a]	118.1-119.2	$C_{14}H_{17}N_3O_3$	5.09	5.07	5.09	5.05
2	NC_6H_{12}[b]	133.4-136.2	$C_{15}H_{19}N_3O_3$	c4.84	4.82	d14.52	d14.24
2	NC_7H_{14}[e]	132.9-133.8	$C_{16}H_{21}N_3O_3$	4.62	4.65	4.62	4.76
3	NC_5H_{10}[a]	102-2.102.8	$C_{15}H_{19}N_3O_3$	4.84	4.87	4.84	4.80
3	NC_6H_{12}[b]	92.5-93.5	$C_{16}H_{21}N_3O_3$	4.62	4.64	4.62	4.70
2	NC_4H_8O[f]	126.5-127.5	$C_{13}H_{15}N_3O_4$	5.05	5.07	5.05	5.05
3	NC_4H_8O[f]	110.0-111.5	$C_{14}H_{17}N_3O_4$	4.81	4.82	4.81	4.80

a NC_5H_{10}=1-piperidyl.
b NC_6H_{12}=2-methyl-1-piperidyl.
c Calcd.: C, 62.26; H, 6.62. Found: C, 62.38; H, 6.53.
d Total nitrogen by the Dumas method (N_D).
e NC_7H_{14}=2,6-dimethyl-1-piperidyl.
f NC_4H_8O=4-morpholinyl.

Summary

People in the drug field deem it advisable to go the the time and trouble of obtaining patents based on adequate disclosures. This situation, while general in the drug field, is quite unusual in the cosmetic field. Since

(*Continued on Page 268*)



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Orange Oil Production

In a comprehensive report on chemicals from oranges, W. Q. Hull, C. W. Lindsay and W. E. Baier (*Ind. & Eng. Chem.* 45:876, 1953) discuss the production of orange oil. They point out that the essential oils of citrus fruits are located in oil sacs or glands ranging from 0.4 to 0.6 mm. in diameter at irregular depths in the flavedo or outer rind of the fruit. These receptacles are surrounded by the debris of degraded tissue and are not connected to the surroundings. The oils are chiefly made up of terpenes. Approximately 90 per cent of the oil from oranges is *d*-limonene ($C_{10}H_{16}$).

The oil may be removed from the peel either by cold pressing or distillation. In addition, oil is centrifugally removed from the oil liquor from the extractors which press the whole fruit. It is noted, however, that cold pressed oil is the most important and the only one admitted by the U. S. Pharmacopoeia.

In one procedure, peel from the reamer extractors is conveyed to double-screw presses which lacerate and twist the peel; causing the oil to be released from the flavedo. Water sprayed on the screen of the press picks up the oil in a 1 per cent emulsion. Orange peel typically contains 12 pounds of oil per ton of oranges; about one-third of which is pressed out in this operation. The oil undergoes refinement in three stages: First, the emulsion is broken down in a high-force, disk-type centrifuge, the discharge from which is 15 to 30 per cent oil. The oil cream passes to a solid bowl centrifuge which yield a 99 per cent oil discharge. Most of the remaining moisture is removed by a third, continuous disk-type centrifugal separator which yields an orange oil of greater than 99.9 per cent purity. After refrigeration, at 0° F., the oil is again centrifuged to remove small amounts of stearoptene, the waxy portion of the oil.

Peel from those extractors which are equipped with a peel shaver is first shredded and mixed with water. It then passes over a vibrating screen and the liquor is centrifuged and distilled as described. Cold pressed oil sees major use in food industries where the flavor of the orange is desired. As mentioned, it is also added to beverage base products. It may be concentrated by vacuum distillation to reduce the limonene content from about 90 to 50 per cent for use in beverage products.

Distilled oil is recovered from the impure effluent of separators used in purifying cold pressed oil. The various discharges contain approximately 0.1 per cent oil. It is distilled in a steam-box still, containing baffles which guide the direction of flow. The vapor goes through a water-cooled condenser and the water and oil are collected in a drum. The distilled orange oil is decanted from the top of the drum. This oil undergoes further refinement through centrifuging, and the product is used in perfumes and soaps.

Maturation of Ambergris Infusion

Experience has shown, H. J. Strausz (*Soap, Perf. & Cosmetics* 26:256, 1953) that a freshly prepared ambergris infusion (sometimes known also as "tincture" or "extract") has hardly any odoriferous value and no fixative and mellowing properties at all. The infusion must be maintained in well-stoppered bottles with frequent shaking at warm room temperature (about 25° C.) for nine to twelve months to mature, and thus to acquire its outstanding properties before filtering from the insoluble sediment.

It has been found by Ruzicka and co-workers that the characteristic, long-lasting ambergris odor of well-matured infusions is the result of a constant autoxidation of ambrein with the formation of the volatile oxidation products, dihydro-gamma-ionone (a ketone) and ambreinolid (a lactone), this being probably catalyzed by the small amount of copper contained in ambergris. Both oxidation products possess together the very fine, typical and long-lasting odor of ambergris.

A number of methods for hastening this indispensable process of maturing has been suggested, but so far without any marked result. In the experiments carried out by Strausz, attempts were made to accelerate maturation of ambergris infusions by means of artificial oxidation. Experiments with more powerful oxidizing agents gave poor results or caused the ambergris odor to disappear. However, the addition of a 20 volume per cent solution of hydrogen peroxide to a freshly prepared 3 per cent alcoholic infusion of finest silver-grey ambergris, in accordance with the formula below, has shown a marked success in hastened maturing:

Q-spirit, finest	**1 liter**
Ambergris, powdered	**30 Gm.**
Hydrogen peroxide solution, (20 vols. B.P. 1948)	**50 Gm.**

These materials were kept at about 25° C. room temperature in a tightly stoppered bottle and shaken each day for a few minutes. After six weeks the mixture was filtered. The filtrate was compared with a 12 months' old, fully matured, filtered infusion of the same quality ambergris. Delicacy and strength of the typical ambergris odor were identical on absorbent paper strips, both immediately and after "airing" at ordinary room temperature for three months, indicating the same duration of evaporation, or the same fixative value.

Crimean Turpentine

Examination by I. I. Bardyshev and K. V. Bardyshev (*Zhur. Priklad. Khim* 25:1095, 1952 through *Chem. Abstr.* 47:4104, 1953) of a large number of specimens of turpentine from *Pinus pallasiana* of the Crimea shows significant individual variations from tree to tree. The range of physical characteristics were as follows:

Specific gravity	**0.8570-0.8700**
Index of refraction	**1.4668-1.4730**
Specific rotation	**−12.58 to −36.54°**

Fractional distillation revealed the presence of *l-alpha*-pinene, *dl-alpha*-pinene, camphene, *l-beta*-pinene, *beta*-myrcene, dipentene, *l*-limonene, and unidentified, higher-boiling substances that contain oxygen. It was also found that *alpha*-pinene comprises about 87.2 per cent of the total, camphene 1 per cent and *l-beta*-pinene 2.3 per cent, while myrcene, limonene, and dipentene together comprise some 2.4 per cent.

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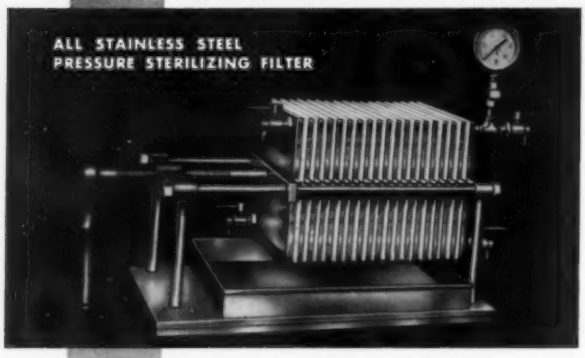

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Animal Health

Diarrhea in Calves

The favorite formula of J. E. B. Mouw (*Vet. Med.* 48:203, 1953) for the control of scours in young calves is as follows: Mix three parts of kaolin-pectin milk of bismuth preparation with one part of paregoric. Dose recommended for calves up to 100 pounds is 2 ounces of the mixture the first dose, with 1 ounce every 12 hours thereafter. When necessary he uses the above preparation in which various sulfonamides have been added. In severe cases, dihydrostreptomycin *per os* is also used. Dosage of from ½ to 1 Gm. per 100 pounds every 12 hours is sufficient.

Vaginitis in Cattle

According to J. B. Herrick (*N. Am. Vet.* 34:406, 1953) infectious vaginitis is usually thought of as the granular type, a chronic contagious disease of cattle found in many herds, especially where the frequent introduction of females is common. Another type of vaginitis that is not so often observed is an acute pustular or vesicular type that is also highly infectious and which is thought to be transmitted by the sire.

In all cases, it is recommended that all breeding operations stop for 60 to 90 days. The females should then be treated individually. A weak (1 to 2 per cent) Lugol's solution has been used quite extensively as a douche in repeated treatments, with reported success. The use of a mixture of equal parts of glycerine, ether and 1 to 2 per cent Lugol's solution is preferred for a vaginal douche in repeated treatments four days apart.

Terramycin bolets (1 Gm.) have been used in three herds. The bolets were placed in the vaginal vault with the aid of a speculum or a balling gun. This was repeated three times with a three-day interval between treatments. Observations, made with the aid of a speculum and light at the end of treatment, showed absence of the infection. Six bulls that were similarly treated also showed freedom from any lesions after treatment. In the treatment of bulls, however, it is preferable to use a terramycin douche, because the secretions are not sufficient to dissolve the bolet.

Drops for Nonspecific Conjunctivitis

A preparation for the treatment of nonspecific conjunctivitis is given by R. F. Minnich (*Vet. Med.* 48:204, 1953) as follows:

Zinc sulfate	**1 gr.**
Propadrine hydrochloride, 3%	**1 fl. dr.**
Pontocaine hydrochloride, 2%	**1 fl. dr.**
Rose water, to make	**1 oz.**

The dose is three drops per eye, three times daily.

Penicillin and Gosling Growth

While it is well established that antibiotics cause growth stimulation in chicks and poults under certain conditions, no evidence on this question appears to have been published with respect to goslings. To remedy this situation, S. J. Slinger, E. S. Snyder and W. F. Pepper (*Poultry Sci.* 32:396, 1953) made studies in which paired groups of White Chinese X Emden goslings were fed a pelleted basal diet and this same diet plus penicillin. Similar groups received these diets plus grain free choice while others were given the same diets and free access to fresh lawn clippings.

Penicillin caused growth increases in the groups fed pellets or pellets and grain. These increases were significant in males at 2 weeks of age but not at 4, 6 or 8 weeks of age. The weight increases in females were not significant. When fresh lawn clippings were before the birds at all times penicillin caused no increase in weight. Feed efficiency was not improved by penicillin. The results indicate that a growth response to penicillin was obtained in the early stages of growth in the absence of fresh green feed. No such response was obtained when fresh green feed was available even in contaminated premises. Penicillin appeared to exert a beneficial effect on the rate of feathering in goslings. In addition, birds receiving the antibiotic consumed more grain in relation to pellets as compared to their controls.

Antibiotics for Hogs

It is noted editorially in the *Rural* New Yorker for March 7, 1953, that a tabulation of results of worldwide scientific experiments shows that terramycin and aureomycin are the most effective of the antibiotics in stimulating growth in pigs, according to a recent report to the National Vitamin Foundation.

The data presented was gathered from a study of a large number of tests conducted over the last three years in this country and abroad covering the use of antibiotics in swine rations. The report, giving daily gains as compared with those of control animals receiving the same rations without any antibiotic supplement, establishes that terramycin and aureomycin are more suitable for swine feeding than the other antibiotics. Terramycin had an average growth response of 17.6 per cent above the controls and aureomycin had 15.1 per cent. Penicillin, in third place, stimulated growth gains averaging 10.4 per cent; bacitracin, fourth, gave 9.5 per cent; and streptomycin, fifth, nine per cent.

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Abreast Of The Markets

Numerous Price Changes in Essential Oils; Korean Truce Shows Little Effect So Far

The markets continued to exhibit a seasonal inactivity last month. There were quite a number of price changes in the essential oils, but in the other categories, prices remained rather constant. Highly indicative of this sluggishness are the respective graphs on this, and following, pages. The essential oils index dropped off slightly, while the botanicals and cosmetic raw materials indices each advanced slightly. There was absolutely no change in the medicinal chemicals index which remained at 102.7 for July.

So far, the Korean truce has had very little effect on the markets as a whole. The essential oils such as anise and cassia continue to be restricted from entering the United States, although they are being sold heavily in other parts of the world. The reaction, in fact, seemed to be that consumers would prefer to wait a little while and see what will develop in world conditions before they make any large purchases. This is especially true in the botanical field, reports one source, who says that business was very slow during the latter part of July.

One very active phase of the markets occurred in the citrus oils, the use of which has reached its peak during these hot months. There is quite a severe shortage in lemon oil, both from California and from Italy, and no one is able to express any optimistic views on its outcome in the near future. Orange oil has improved considerably in stability, with the consumption more in line with the production that had been so previously.

No further developments have occurred in the coumarin picture, although some vanilla sources expect an increased demand in their product if coumarin continues to be shunned by food flavorers.

Prices quoted in this section were current on the first of this month.

Lanolin More Favorable

The over-all picture in lanolin has improved in recent months. Although demand has remained at a fairly steady level, consumers are now able to meet most requirements without difficulty.

Saccharin Unchanged

Consumer demand for saccharin has been quite steady for several months. Stocks are sufficient to handle all consumer needs, and will probably continue to be for some time to come, according to spokesmen.

Acetophenetidin Steady

The price of acetophenetidin is unchanged at $1.15, and demand for the item is being maintained at a constant level. There is ample material on stock, according to the trade, to handle all present needs.

Outlook on Iodine

It is still too early to tell what the result of last month's price drop in crude iodine will be as far as the iodine salts are concerned. While the demand for the iodides is fairly strong, authorities doubt that price cuts along this line will be as great as they were in the crude iodine itself which is now selling at $1.30.

Formaldehyde Very Active

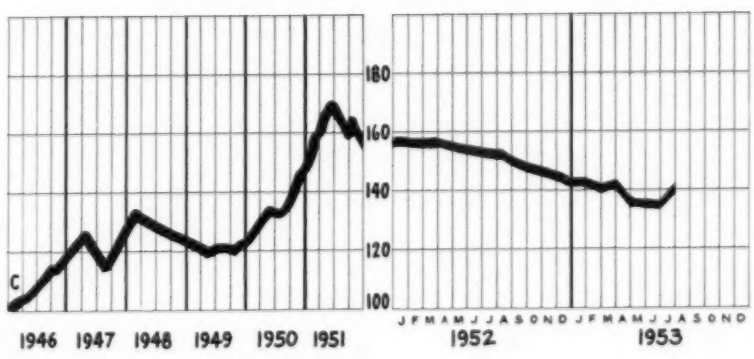
The consumption of formaldehyde was reported to be extremely heavy last month, with the available stocks quite depleted. In many cases consumers were restricted in their purchases. An even tighter condition is looked for later in the year.

Menthol Unsettled

While the Japan menthol is being quoted on spot at $7.50 a pound, China is offering it to Europe and Canada at the much lower figure of $4.50. This being the case, the Brazilian menthol has been selling on spot at $5.80 a pound, or $1.30 higher than the Chinese. It is almost certain, therefore, that the Chinese material will offer very severe competition to the

(*Continued on page 252*)

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced from 135.6 to 141.2. Balsam copaiba and balsam tolu were higher.

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Alcohol, Quicksilver, Vanillin Show a Little Change; Glycerine Tightening up Further; Vanilla Beans Continue Price Advance

There was little change in the alcohol market last month, with demand said to be running along at a steady rate. The price for the Denatured No. 1 special remained at 55 cents a gallon.

The following data on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of May, 1953, as compared with the same period one year ago, was released last month by the Alcohol and Tobacco Tax division of the Bureau of Internal Revenue, Treasury Department:

Production

	Gallons	
	1953	1952
°Ethyl	43,393,631	26,062,133
*Completely denatured	39,201	22,263
*Specially denatured	19,161,808	16,459,163
Withdrawals		
°Ethyl, tax paid	2,030,230	1,394,984
tax free	40,047,350	40,479,338
*Completely denatured	34,687	21,211
Specially denatured	21,809,842	19,962,308
Stocks		
°Ethyl	78,580,691	82,344,081
*Completely denatured	30,592	43,512
*Specially denatured	8,824,402	8,510,989

*Wine gallons. °Proof gallons.

Glycerine in Firm State

There was almost no foreign glycerine in the United States at all during July, while the crude and refined material was in good demand, although the demand had dropped off somewhat, according to the seasonal pattern. Production of the material was said to be keeping up with the current needs, and spokesmen believed this equilibrium would continue to be held during the immediate future.

Vanillin Steady

Both lignin and guaiacol vanilling were selling for $3 last month, as they have been for some time, while eugenol vanillin was much higher at $6.75 in most quarters. A limited amount of the latter was available for $6.50.

No Change in Quicksilver

The price of mercury metal remained at $191 a flask during July, although there were reports of some Mexican material available at $185. There was a sluggish tone to the market in general.

Vanilla Beans Firmer

Reports have been received from the origin to the effect that the Madagascar crop of vanilla beans for this year will be much lower than normal. Dealers have therefore advanced their prices somewhat, and are of the opinion that the impending shortage will be of long duration. At the same time, Mexican beans were receiving more attention than normal and dealers fully expect greater activity in this line during the months to come.

The Bourbon beans are now selling at $5, up to $5.50 a pound, while the Mexican cuts extend from $4.65 to $4.75 and the Mexican whole beans, from $5.25 to $5.50.

Citral Position Good

There was plenty of citral on hand last month to take care of all needs, and replacements were readily available. The price ranged from $3.20 to $3.75 a pound and were expected to remain that way for some time to come.

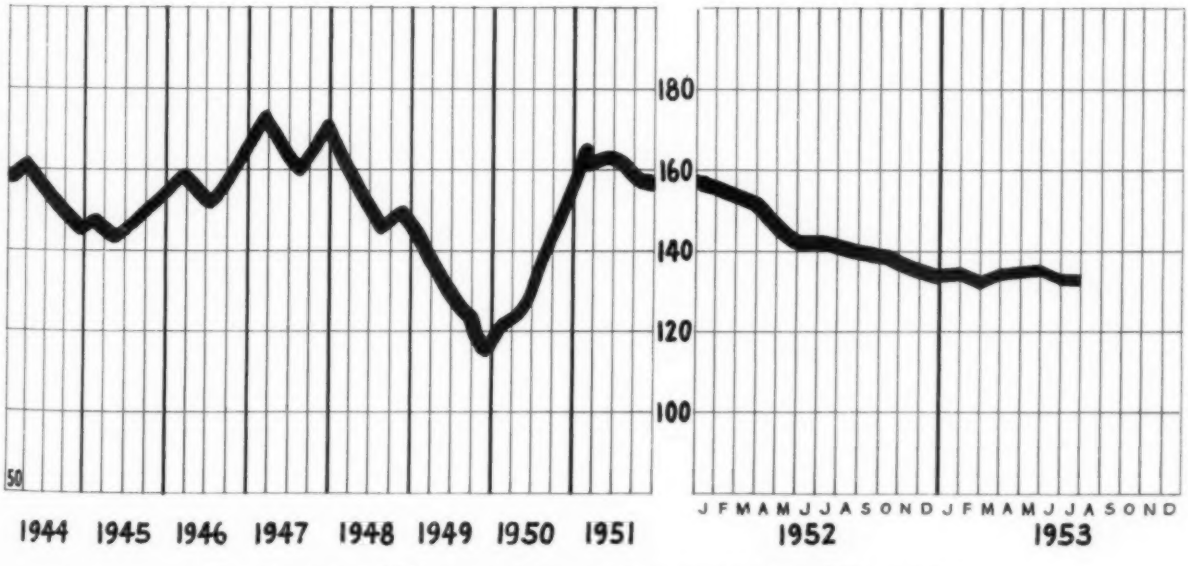
Citric Acid Active

Demand for citric acid continued to be very heavy last month, according to reports, with the hottest part of the summer being felt. In spite of the greater consumption, however, suppliers were able to keep up with it without difficulty. Prices of the acid continued firm, following the advance of two months ago.

Carnauba Wax Very Quiet

As a result of very little activity in this product, prices were reduced 1 cent all along the line, the North country No. 3, refined, selling at $1.13, and the No. 1, yellow, at $1.35 a pound. The spot supplies were said to be fairly light, but they were quite sufficient to handle the demand at the present time.

50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for July went down from 132.9 to 132.4.

JULY PRICE CHANGES

UP

Agar Agar, No. 1 15c
Anise Oil, U. S. P. 15c
Apricot Kernel Oil 4c
Balsam Copaiba Para 10c
Balsam Tolu 20c
Cajuput Oil 60c
Celery Oil $3
Coriander Oil $1.50
Ergot 15c
Ipecac Root 75c
Lemon Oil, Calif. 90c
Ital. 40c
Sage Oil, Spanish 35c
Dalmatian 75c
Vanilla Beans, Bourbon 50c
Mex. Cuts 40c
Mex. Whole 75c
Tahiti 25c

DOWN

Bergamot Oil 75c
Birch Oil, Southern $1.40
Birch Tar Oil, Rect. $1.85
Caraway Oil 10c
Cedarwood Oil 5c
Citronella Oil, Ceylon 12c
Clove Oil 75c
Cubebs Oil 60c
Eucalyptus Oil 15c
Ginger Oil $1
Lemongrass Oil 10c
Pimento Berry Oil 5c
Rosemary Oil 10c
Sassafras Oil 20c

Senega Root Firm

Senega root is becoming increasingly tighter because of excessive rains in the country, and also because it has been very difficult to obtain any labor to harvest the root.

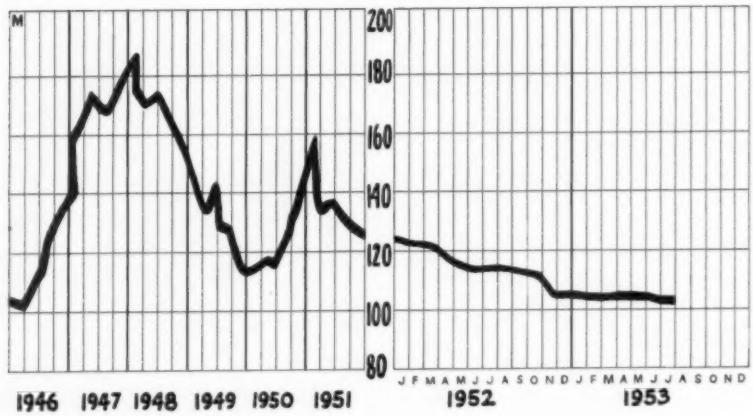
Menthol Unsettled

(*Continued from page 249*)

Brazilian in the world markets, other than that of the United States where Chinese items are banned.

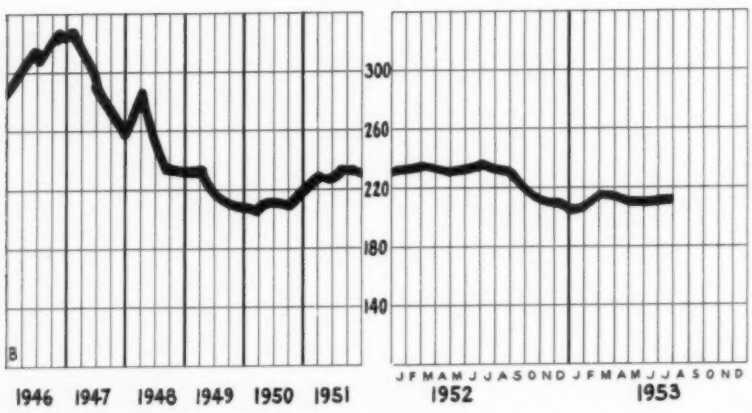
It moreover seems that Brazil will now have to depend very heavily on the American market for business and may reduce its prices more in order to do so. Time will tell what effect this will have on the price level at which the Brazilian menthol will eventually become established.

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index remained at 102.7. There were no changes.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced slightly from 210.1 to 211.8. Agar, balsam tolu and ergot were higher.

Ipecac Root Tight

The price of ipecac root advanced to $5.75 last month, representing a definite firmness which has developed over the last few months. There is very little material available from the origin at the present time.

Agar Very Firm

Stocks of agar in Japan are diminishing, and the entire situation is one of considerable firmness, according to sources in the trade. The present price for No. 1 Kobe material extends from $2.25 to $2.40.

In order to show the looming importance of European countries in respect to imports, as far as agar is concerned, it is interesting to note that Japan exported a total of 1,907,716 pounds during the first six months of 1953. Of this amount, Europe received 45 per cent; Asia, 13 per cent; North and South America combined, 13 per cent; and the remaining countries, four per cent.

Candelilla Wax up 2c

Candelilla wax went up 2 cents to the range between 77 cents and 79 cents for the refined material. There were no important developments otherwise.

Ouricury Wax Quiet Also

Not much activity occurred last month in this wax, the price remaining in the vicinity of 80 cents a pound. The stocks on hand were fairly limited, and so there was a firm tone pervading the market.

Lemon Oil in Tight Pinch

California lemon oil went up to $7.25 last month as a result of a very firm situation in which the demand was far outstripping the available supply. There seemed to be no relief in sight during the next few weeks, as consumer demand for this oil is expected to remain at a high pitch through the month of August.

Following in the footsteps of the American oil, Italian lemon oil also took a step up, going to $6.50 a pound. Fur-

ther adding to the difficulty is that any oil that may reach the United States from foreign sources is not expected to come anywhere near meeting the demand created by the shortage of domestic oil. It is reported that Italian oil which might have been shipped to this country has been bought up by other European countries and Russia in very large amounts.

Orange Oil Steadier Now

Following a period of rapid price decline and softening market conditions, orange oil is now becoming more stable, according to spokesmen, who indicate that demand for the item is on the active side. If anything, the price will tend to advance somewhat in the immediate future. The California oil ranged from 90 cents to $1.75, and the Florida oil, from 80 cents to $1.25.

Dillweed Oil Shortage

Because the consuming season on dillweed oil is now at its peak, there is a very heavy demand for the item at the present time. As a result, there will be a very small amount of carry-over oil until the new crop appears. Some authorities believe there will be a severe shortage later on. Prices were ranging between $3.70 and $4.

Geranium Oil Steady

Both the Algerian and Bourbon geranium oils remained in their respective price ranges last month of $10 to $11 and $9.75 to $10.75. The general belief is that neither oil will advance in the near future because there is not sufficient demand to support such an increase.

Peppermint Oil Quiet

There has been very little activity in peppermint oil in the past month or two because of the impending arrival of new-crop material. Toward the end of July, prices tended to fall off a little bit because of the competitive atmosphere which the new crop is causing. The over-all picture, however, is still greatly unsettled because it is not certain as to whether the coming crop is going to be as large as previously anticipated.

Spearmint Oil Unsettled

Like peppermint oil, spearmint is also in an unsteady position at the present time, awaiting the outcome of this year's crop which is appearing this month in the Midwest. Indications are that the yield may be less than had been expected owing to the drought conditions in that area. Spearmint oil at the present time is being quoted between $8.50 and $9.25 a pound.

Lemongrass Oil Reduced

The price of lemongrass oil went down 10 cents last month to $1.20 a pound.

Prices below $1 were said to be in effect in some quarters; demand has been very light recently.

Citronella Oil Lower

The Ceylon citronella oil was considerably lower during the latter part of July, extending between 48 cents and 80 cents a pound. Spokesmen indicated that the market would probably level off at this point, with no further declines. At the same time, shipping prices were said to be easing off, adding to the softer position of the oils.

Clove Oil a Little Lower

For the first time in many months, the price of clove oil dropped off a small amount, perhaps foretelling of future declines to come. The oil was being quoted at $9.25 a pound toward the end of July. Reason for the initial decline was thought to be lower shipping prices of the clove spice. Since the spice itself was reduced only recently, not enough time has elapsed to determine its full effect on the oil.

Ginger Oil Reduced

While there were reports of ginger oil selling for as low as $11 a pound, most sources began at $13 and extended upwards. Whether or not the higher prices will drop to the lower $11 level was left unanswered by the end of July.

Patchouli Oil Unsteady

While some sources reported an increase in the price of patchouli oil, others held the level at $7.25 a pound. Not only have prices been inching up at the origin, say the dealers, but shipping prices are also increasing. They look for more advances in the future.

Anise Oil Higher

The tight situation in anise oil in the United States continued to worsen during July, with the price having advance to $2.35 a pound. Hardly any oil entered the country, while Canada, England and European countries had ample supplies.

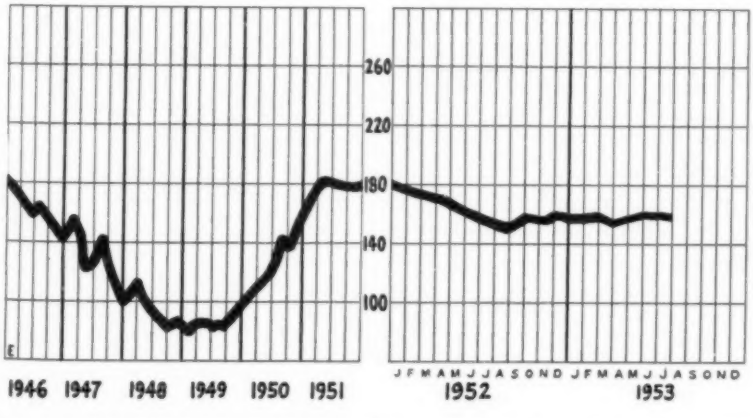
Wormseed Oil Sluggish

Although the price of wormseed oil has been holding at about $8.25, the general tone in the market has been on the soft side. No new material is expected until early Fall, but some dealers are anxious to get rid of last year's material before that time arrives.

Bergamot Oil Reduced

The Consortium in Italy lowered the bergamot price to $11.25 last month, with the upper end of the range at $14. In view of the sizable stocks of oil in this country, it appeared certain that bergamot would remain very steady in the immediate months ahead. Dealers do not expect any further reductions for the time being.

15 Essential Oils—Weighted Price Index, 1926=100



The essential oils index declined from 159.0 to 157.0. Anise and lemon oils were higher; bergamot, citronella, clove and eucalyptus oils were lower.

Industry's Books

The Intelligent Use Of The Microscope, by C. W. Olliver, Chemical Publishing Co., New York, (1953), 190 pp., Cloth, $4.

This book will teach beginners and students how to use the microscope intelligently and will guide them to an understanding of the possibilities and limitations of this instrument, of the principles of its design, and of the precise functions of its components and accessories. It shows the microscope as an optical instrument with several degrees of efficiency, the lower efficiency, being sufficient for routine work and even many forms of research. In a simple manner it describes the hows and whys of microscopy and provides the reader with the experiences that are necessary to the decision as to which rules can and which cannot be ignored in microscopic observations, according to circumstances.

Federal Food, Drug, and Cosmetic Act, Judicial and Administrative Record 1951-1952, by Vincent A. Kleinfeld and Charles Wesley Dunn, Food Law Institute Series published by Commerce Clearing House, Inc., New York, 588 pp., (1953), Cloth, $12.

This book follows, for the period 1951-1952, the general pattern pursued in Kleinfeld and Dunn, "Federal Food, Drug, and Cosmetic Act, Judicial and Administrative Record, 1938-1949", and "Federal Food, Drug, and Cosmetic Act, Judicial and Administrative Record, 1949-1950". The plan of these books is to furnish useful guide and source books not only for the attorney, who may or may not specialize in the field, but also for the business executive and administrative official in the food, drug, cosmetic and related industries who may find it useful to have the material available for ready reference. Essentially the book is divided into four portions. One part contains every opinion rendered during 1951 and 1952 under the Federal Food, Drug, and Cosmetic Act which appears in the jurisdictional law reporters and, in addition, various so-called "unpublished" decisions, findings of fact and conclusions of law which cannot be found except perhaps in notices of judgment published by the Food and Drug Administration and the CCH Food Drug Cosmetic Law Reports. The second portion of the book contains the "Statements of General Policy or Interpretation" issued by the Food and Drug Administration during 1951 and 1952. The third section of the book contains in full any new regulations promulgated by the Federal Security Administrator during 1951-1952 dealing with definitions and standards for foods. The fourth major part of the book furnishes references to the pertinent material for the period 1951-1952 in connection with any problem which may arise under any section of the Act.

Pharmaceutical Formulas, 12th Ed., Vol I, 1139 pp., The Chemist and Druggist, London, (1953), Cloth, 37s. 6d.

The first edition of this work was published in 1898. This new 12th Ed., has been revised throughout and incorporates a wealth of new material. The book contains a collection of several thousand formulas which pharmacists and others in the drug and allied trades require. The formulas cover the whole field of galenical preparations. The material has been selected from twenty-six pharmacopoeias, many Dominion and foreign formularies, hospital pharmacopoeias, medical and pharmaceutical publications and other sources. Where experience has shown that older formulas are still in frequent request, they have been retained. A special effort has been made to include formulas for preparations or prescriptions designated in the literature by the name of their author or originator. In a table "Pharmacopoeial Equivalents" the official titles and official synonyms adopted by foreign pharmacopoeias are given alongside the designations of equivalent preparations in England A second table gives the concentration of the acids, alcohols and alcohol solutions figuring in the twenty-six pharmacopoeias and two semi-official works of reference Notes are included on improvements and new methods introduced in the manufacture of pharmaceutical preparations.

Analysis of Aluminum Alloys, A compilation of Modern Methods, by G. H. Osborn and W. Stross, 144 pp., Chemical Publishing Co., Inc., New York, (1953), Cloth $3.50.

This is a survey of analytical methods many of which are new, others are modified versions of known methods, and a few are established standards. Methods range from those requiring modern physicochemical instruments, such as a polarograph and photometer, to those which may be carried out with the normal equipment available in the general chemical laboratory. The book lists gravimetric, volumetric, electrolytic, photometric and polarographic methods for the determination of the most common elements, such as copper, magnesium, silicon, iron, manganese, nickel, zinc, tin, antimony, and chromium. Methods for the determination of less common elements such as beryllium, bismuth, calcium, silver, and sodium are also described.

A History of Anesthesia, With Emphasis on the Nurse Specialist, by Virginia S. Thatcher, Editor, American Association of Nurse Anesthetist Publications, 289 pp., Illus., J. B. Lippincott Co., Phila., (1953), Cloth, $5.

The purpose of this work is to extend the knowledge of anesthetists about themselves beyond the framework of personal reference and of already published histories. If the place of the nurse as an anesthetist receives special emphasis in this history, it is because in the others she has been derogated or ignored. The plan of the work is to look at the administration of anesthesia as a historic development, rather than at the discovery of agents and methods as being of primary historic significance. Since history treats of the way in which man, individually and collectively, uses his energy and the energy of nature, the men and the women who were the instruments of collective man in his search to conquer the pain of surgical operations are the heroes and the

heroines of this story. This book is divided into the following parts: Part One—Toward a New Art. Part Two—Toward a New Science. Part Three—Organized Nurse Anesthesia.

Contact Dermatitis, by George L. Waldbott, M. D., Senior Physician, Harper Hospital, 218 pp., Illus., (1953), Charles C. Thomas Publisher, Springfield, Ill., Cloth $8.75.

Contact dermatitis is the most common skin disease—occurring in all age groups. Everybody is susceptible to the development of the disease, regardless of whether or not an allergic background exists. This work presents a new approach, namely the determination of the cause of contact dermatitis by studying the appearance of the lesions (the usual approach is history taking followed by patch testing with suspected items). In some cases a single glance at the lesion can lead to the detection of the cause. The book also contains an atlas of photos and paterns for comparison with lesions to be investigated. It includes treatment of special interest to dermatologists, allergists, industrial physicians and surgeons—and to every general practitioner who is usually the first to see these lesions. A unique approach in analyzing and treating the cause of Pruritus Ani and Pruritus Vulvae are of special appeal to proctologists and gynecologists. The search for the causes of contact dermatitis is one of the most intricate detective tasks with which physicians are confronted. As it is the main purpose of this monograph to aid general practitioners, as well as specialists in this task, all theoretical aspects of the disease are eliminated. This is a practical book—in brief, an attempt is made to follow the clinician into his office and to proceed with the practical management of the patient.

Chemical Process Machinery, Second Ed., by Emil Raymond Riegel, Ph.D., Professor of Chemistry, Emeritus, University of Buffalo, 735 pp., Illus., Illus., Book Div., Reinhold Publishing Corp., New York, (1953), Cloth, $12.50.

This enlarged edition of Riegel's widely-adopted Chemical Machinery brings the material of the previous volume abreast of latest developments in the equipment of the chemical and process industries. Many new diagrams, photographs and tables make the construction and operation of recently employed machinery readily understandable to students and laymen as well as to engineers. Listing only equipment now commercially available, this book describes and illustrates such striking new devices as multispheres and multicylinders, high-speed centrifugal separators and such new or greatly improved equipment as the P-A cyclonic spray tower, the P-A Venturi scrubber, continuous crystallizers, absorption refrigerators, the molecular still, and the turbo-drier. New descriptive material is included on distillation, the mixing of liquids and instruments for the control of chemical processes, as well as greatly expanded descriptions of evaporators, driers, heating and cooling equipment, pumps, and scores of other important topics.

The Farmer's Veterinary Handbook, by Jules J. Haberman, D.V.M., assisted by Mary L. Holcomb, Prentice-Hall, Inc., New York, (1953), 305 pp., Illus., Cloth, $4.95.

The high cost of animal ailments today is something that worries every farmer. This book tells how s cuto down the cost of such ailments, prevent needless loss of livestock, keep farm animals in such good health that they do not become easy prey to the hundreds of diseases that threaten them. This handbook contains hundreds of hints for better management of flocks and herds. This work tells not only how to recognize, treat, and prevent diseases and cope with emergencies, it also includes many invaluable hints for getting better results from herds and flocks.

The Use of Drugs, a Textbook of Pharmacology and Therapeutics for Nurses, by Walter Modell, M.D., Assistant Professor, Cornell University Medical College, and Doris J. Place, R. N., Instructor in Medical Nursing, Cornell University New York Hospital School of Nursing, 468 pp., Springer Publishing Co., Inc., New York, (1953), Cloth $4.50.

This new book for nurses answers the need for an instructive and useful text on drugs and their use. It gives the nurse, student, teacher and graduate alike, information she needs and wants, easy to understand and easy to find. The responsibilities of the nurse are clearly outlined as regards every phase of drug therapy: her function in administering medicine and in observing the effects on the patient. Drug action, both therapeutic and toxic, is clarified in text and pictures. The nurse is shown what reactions to expect and learns how to meet emergency situations. The approach to drugs is practical so that the nurse can use it for existing preparations as well as new ones she will encounter later.

A Text-Book Of Pharmacognosy, by George Edward Trease, Director of Pharmaceutical Studies, University of Nottingham, Sixth Ed., Illus., (1952), Bailliere, Tindall And Cox, London, $8.

This book, first published in 1934, was designed for students of pharmacy and in all subsequent editions their needs and examination syllabuses have been kept in mind. This edition contains a considerable increase in the number of references to books and researches. Whereas in former editions these were given in footnotes, most of the references are now collected together at the ends of chapters or after the drugs to which they refer. The work as a whole is devided into Five main parts as follows: Part I—General Principles. Part II—Drugs of Vegetable Origin. Part III—Drugs of Animal Origin. Part IV—Chemistry. Part V—Microscopy.

Synthetic Organic Chemistry, by Romeo B. Wagner, Former Assistant Professor of Chemistry, The Pennsylvania State College, and Harry D. Zook, Assistant Professor of Chemistry, The Pennsylvania State College, John Wiley & Sons, Inc., New York (1953), 887 pp., Cloth, $11.50.

This book is designed to summarize in a single volume methods of organic syntheses most frequently employed in the preparation of mono-and difunctional compounds. The methods are collected in chapters each of which is devoted to the formation of compounds containing a particular functional group or related groups. In order to present a wide coverage of organic chemistry, detailed discussions were omitted; however, frequent references to the original literature as well as to other books and review articles are given. An effort has been made to include among these references examples of the better preparative procedures. Tables supplement the text in recording additional references and other examples. Moreover, the tabular material stands alone as a handy index to the literature for the preparation of starting materials of relatively simple structure.

The Steroid Wave

(Continued from page 177)

hormones is not based on anything so specific or limited as the control of rheumatoid arthritis. This group of products is thought to be the key to the next great advance in medicine—a step which is predicted to be by far the greatest of all time. Locked up in this group of complicated organic chemicals are believed to be the answers to some of the most baffling medical problems. It is indicated by some authorities that the eventual development of this group of therapeutic agents could bring about an almost complete revolution in the concepts of medical treatment and therefore result in a radical change in the curricula of medical schools.

Pharmacists at the Crossroads

(Continued from page 175)

It is becoming more widely recognized in the industry that the professional status of the pharmacist is not only the stronghold of his security but holds opportunities for vigorous growth that have not been properly explored. Research in retailing is a relatively new idea and has few practitioners today. For the pharmacist it could hold enchanting hope. It is a pity that the leaders in the industry, notably wholesalers and chains, are so absorbed with making a grocery store out of the drugstore that they have no time to explore the possibilities of professional expansion. The grocery store, and in fact all retailers of pre-sold consumer merchandise are inexorably on the path to impersonal display and sales of merchandise. Personal service, skilled competent advice, and professional reputation are unneeded and in the way here.

Among the professional opportunities for the druggist which need to be explored in some form of retail research are surely those in which the pharmaceutical manufacturer is at the threshold of developing into many million dollar markets.

It is true at this time that only nutrition (dietetics) holds the promise of meeting the immediate problem of many druggists with a department capable of producing substantial retail sales now. But anyone who observes the day-to-day trend of research and new products or new uses for established products, in the pharmaceutical industry, must be impressed with the speed in which animal and plant health is being developed as an important part of this industry's sales.

Whatever happens ,this is a period of transition for the retail druggist. For those who prefer, and see substantial opportunities and security in following the the path of professionalism, it does look as if the pharmaceutical manufacturer is pointing the way and providing the means. These pharmacists may be able to evolve the kind of retail store which will continue to provide primary distribution for the dynamically ex-

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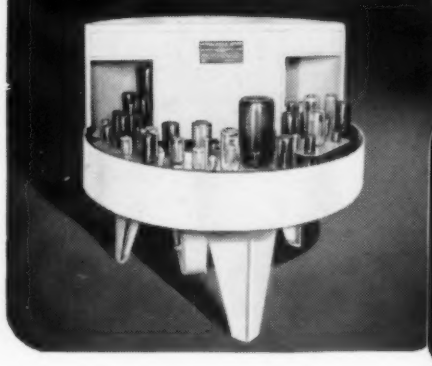

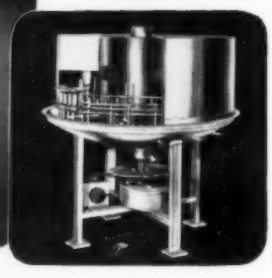

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panding pharmaceutical manufacturer and in this way continue the essential importance of the pharmacist to the pharmaceutical manufacturer.

Those others who want to, or find it necessary, to stay in front in the retail brawl distributing pre-sold home necessities must carefully appraise the ultimate changes which such a decision must bring to the retail pharmacy as we know it today. They must appraise their continued place in the distribution of the pharmaceutical products and their ability to participate in dynamically expanding fields which may far outreach any place they can maintain in pre-sold necessities.

The Aging Skin

(*Continued from page 179*)

mon and many middle-aged and older men and especially older women must actually dispense with the use of soap or "soapless" detergents. In these cases, other methods must be adopted, such as cleansing with oil, with a nonperfumed and noncolored soft cream or unguent, or with water and a starch (Linit) or oatmeal (Aveeno) preparation. Of interest in connection with this last preparation is the recent report by Grais[17] on the use of colloidal oatmeal where soap is contraindicated. He describes this product as a gummy fraction of oatmeal which cleanses the skin without injury and leaves a protective coating on it.

The need for special cleansing aids is also noted by Palmer.[11] She observes that, in individuals with very dry skins, cream or oil cleansing is to be preferred.

Her views, as well as those of other dermatologists and geriatricians, point to the importance of preparations that are generally classed as cosmetics. It is not surprising, in view of the potential size of the market, that some cosmetic manufacturers are developing products particularly suited to the needs of the older woman.[18] This trend is indicated by the successful marketing of hormone creams and special emollient creams. Research will no doubt yield new products for the geriatric group, but many of the cosmetics now available are quite suitable for use by the older woman.

Creams play a major role in the care of the skin. In considering the cosmetic problems of the aging woman, Palmer[11] states that commonly used creams have a wide variety of applications. For example, "liquefying" creams with low melting points are used chiefly for cleansing purposes. Creams with higher melting points, which are used for their softening and protective effects, contain such materials as lanolin, cholesterin, cocoa butter, beeswax and many other fatty substances. Vanishing creams are also used for their softening effects as well as for their masking properties when various hiding powders or pigments are incorporated. Thus, creams of suitable types can serve to soften and preserve the aging skin.

When cleansing creams are used to remove dirt, excretory products and superficial scales, the cosmetic product is applied generously, massaged lightly and removed with a tissue. Such cosmetics, says Conley,[10]

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- Warm whiteness

PHYSICAL

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- Good oil absorption
- Superior adherence
- Good fluffiness
- Perfume fixative
- Easy to blend and tint

CHEMICAL

- Essentially neutral
- Amphoteric
- Exceptional purity
- Deodorizes by neutralizing perspiration

PHYSIOLOGICAL

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are essentially harmless, except in rare instances where there is sensitivity to one or more ingredients.

A number of factors, both natural and artificial, are at work to cause dryness of the skin and to contribute to the aging process. Sun and wind are important factors. British observers report that hardly any Caucasians who live in the tropics or semitropics for any length of time can escape intensified aging changes. Dermatologists in this country have noted similar changes in women who have for years taken part in such outdoor activities as swimming, sailing, tennis or sun-bathing.

Palmer[11] has warned that the widespread use of very hot hair driers intensifies and hastens certain degenerative changes about the face and neck. The stream of hot air pouring over the back of her head and swirling over her forhead and cheeks increases the tendency to early leatheriness, superficial scaling and blotchy pigmentation.

Considering these drying and aging influences, one authority[14] advises that people of all ages should avoid unnecessary over-exposure of the skin to the sun and intense heat. Proper use of effective sun-screening agents is to be encouraged. Also important is the regular use of emollients to help combat excessive skin dryness.

Emollient creams and lotions therefore play a major role in the care of the aging skin. Today's pleasantly scented, nicely textured emollient creams are a marked improvement over the lubricating preparations used by former generations. As explained by Harry,[20] emollient creams and lotions keep the outer corneous layer of the skin soft and supple and minimize chapping and windburn. In minimizing the undesired effects and in replacing lubricating oils removed from the skin by constant washing with cleansing agents, these cosmetics delay the onset of wrinkling and slow up the premature aging of normal skin.

The benefits from the regular use of emollient cosmetics in overcoming skin dryness are well recognized. It is realized that no cosmetic can postpone or correct skin changes due to aging, such as wrinkles, crow's feet and crepey throat. However, says Conley,[21] the consistent use of an emollient cream will do as much as possible in postponing and preventing those changes, due to prolonged dryness, that make the skin look old. For best results, she advises the use of an emollient cream at least once every 24 hours; leaving it on overnight if possible. The regular use of proper creams can help considerably in softening wrinkles and can provide an ideal surface for makeup. It should be noted that emollient creams are often available under such names as night cream, dry skin cream, skin-softening cream, lubricating cream and lanolin cream. Eye creams and throat creams also fall into this category as a rule.

Of course, various other types of cosmetics have their roles in the care of the aging woman's skin and in improving its appearance. Quite useful are the various masking or covering agents consisting of pow-

ders incorporated in suitable vehicles. These "foundation" creams, cakes or lotions are generally provided in vehicles prepared for either oily, normal or dry skins. In general, when correctly chosen with regard to color and texture for a given individual, they give the skin a smooth and refreshed appearance. They thus serve a useful purpose, provided the woman is careful to cleanse these preparations from her skin each day so that she does not develop follicular concretions.[11]

Similar preparations are useful for hiding discolorations on the legs due to areas of varicosed venules. "Liquid stockings," which consist of lotions with high covering properties, can serve successfully to obscure these discolorations so that the older woman can wear sheer stockings without embarrassment.[14]

Palmer stresses that care must be taken that the cosmetic does not contain some ingredient to which the individual is sensitive. Many elderly women have dermatoses attributable to cosmetic sensitivities, particularly from nail polish, perfumes, suntan lotions and hair dyes. Frequently, the type of perfume in a cosmetic may cause a local hypersensitivity response. In some cases, the perfume may be a factor in increasing the reactivity of the skin to light, especially sunlight; thus resulting in blotchy pigmentation of the face.

Of course, any one of the other ingredients of a cosmetic preparation may cause an allergic reaction. When this occurs, it is not necessary to permanently avoid cosmetics, but only until the reaction subsides. When another cosmetic is used, one that is free of the offending component, the individual progresses satisfactorily.

Estrogen creams loom large among the preparations designed to combat or slow up the skin aging process. However, there is some difference of opinion as to the value and safety of such hormone creams. Palmer, for example, feels that the effects of topically applied estrogens on the skin of the face are "questionable." Similar opinions have been expressed by others.[22]

Nonetheless, there is considerable evidence that estrogen creams are beneficial to the aging skin. Much of these data have been reviewed in *Drug & Cosmetic Industry*[23] and elsewhere.[24] From these discussions it is apparent that a number of authorities, including dermatologists and endocrinologists, believe that creams or ointments containing 7,500 to 10,000 units of estrogen per ounce of base are both safe and effective. Goldzieher,[25,26] who has done extensive investigation in this field, found that the skin of elderly women responds to the local application of estrogenic ointment by increase in the number of cell layers, restoration of the normal wavy configuration of the epidermis, heightened vascularity and increase in elastic fibrils.

More recently, Goldzieher and his associates[27] corroborated the theory that inadequate hormonal secretion plays an important role in the pathogenesis of senility, at least of the skin. In a detailed study, they observed that, when steroids were applied topically to the skin of 27 elderly volunteers ranging in age from 62 to 84 years, many senile changes were strikingly reversed.

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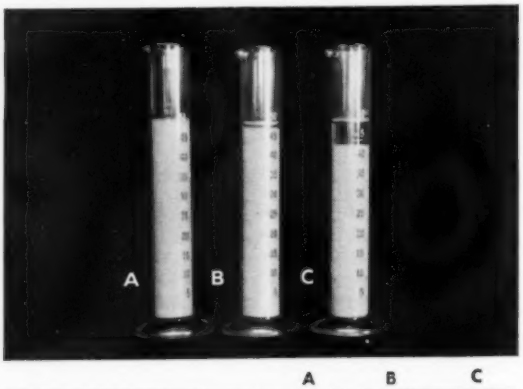

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In summarizing the results of a number of studies, Davis[28] stated that the general results of applying hormone creams were as follows: (a) the skin became smoother, (b) the number and size of the capillaries were increased, (c) the elastic fibrils became more numerous, (d) Senile pigmentation and freckling were diminished, (e) There was evidence of regeneration of surface epithelium, with increased water content of the estrogen-treated areas, and (f) The topical use of estrogens produced a greater effect on the skin than therapeutic doses given orally.

The aging skin is subject to various skin disorders. Many of these conditions are common to other age groups as well, but there are certain dermatologic diseases that are much more frequent among elderly people. Among the more commonly seen senile skin conditions, according to Ronchese,[7] are senile pruritus, kraurosis vulvae, senile ichthyosis, alopecia and canities, papillary varicies (cayenne pepper spots, ruby points), senile purpura and lentigo, generalized senile atrophy of the skin, the senile wart (senile verruca, senile seborrheic keratosis), the cutaneous horn, and cancer of the skin.

Also indicative is the listing given by Ormsby[12] in his discussion of the skin problems of the aged. He notes that although the senile skin is subject to many diseases seen earlier, certain ones occur predominently at this time. They include verruca sinilis, keratosis senilis, angioma, atrophy, pruritus sinilis, alopecia, canitics, epithelioma and carcinoma, and exfoliative dermatitis.

Various statistical studies provide all-over views of the incidence of these and other dermatologic conditions among geriatric patients. Indicative is the study made by Kennedy and his colleagues[13] on 878 patients above 40 years of age. In this group, the incidence of various disease entities, listed in a descending order of frequency was found to be as follows: keratoses, contact dermatitis, vesicular eruptions of the hands and feet, basal cell carcinoma, fungous infections, seborrheic dermatitis, verrucas, infections of the skin, moles, localized neurodermas, acne rosacea, sebaceous cyst, squamous cell cancer, leukoplakia, dry skin, urticaria, scabies, and pruritus vulvae.

Similarly indicative, but concentrating on skin conditions in patients over 60 years of age, are the data gathered by Lane and Rockwood[10] from a review of the records of 2,000 patients. They reported that senile keratosis, epithelioma, seborrheic keratosis, eczema, and contact dermatitis were the most common conditions seen in these older patients. The next five most common skin diseases were pruritus, psoriasis, seborrheic eczema, dermatophytosis, and verrucas.

The management of these dermatologic conditions is adjusted, of course, to meet the needs of the individual patient. In the management of the cutaneous ills of the aged, says Palmer[11], it is necessary to keep in mind the patient's general condition. Adequate understanding of the cutaneous process and the factors influencing it make for better therapy. Thus, an individual suffer-

ing from edema, jaundice, mental depression, nutritional deficiencies, hormonal deficiencies or other conditions will respond satisfactorily only if such medical problems are recognized and managed concurrently with the skin condition. Hence it may be necessary to give supportive therapy, in the form of proteins, vitamins and minerals, when there are clinically indicated. Many skin conditions improve when the patient is placed on small doses of six hormones. Small amounts of testosterone are frequently of benefit in the aged woman.

Such considerations are of major importance, for example, in the treatment of senile pruritus. It has been said[29] that senile pruritus is probably the most distressing dermatitis of the aged and one that often resists all forms of therapy. In the opinion of Zakon, Goldberg and Forman[30] this condition is the most common of the various dermatoses suffered by the aged. They found that itching without any demonstrable skin disease was a cause of complaint in 43 per cent of 222 residents of an old people's home.

As pointed out by Lane and Rockwood,[10] it is hardly necessary to emphasize the dangerous effect that a mild but persistent itching can produce on the life and general condition of the older person. A severe pruritus, if unrelieved, will prevent needed sleep, interfere with appetite, and general nutrition, cause mental depression and greatly affect the general health.

As a rule, the diagnosis of senile pruritus is made only after other causes of generalized itching have been excluded, such as scabies, diabetes allergy, lichin planus, or jaundice.[9] Some dermatologists[31] are of the opinion that senile pruritus is probably the result of degenerative changes in the skin, with associated dryness and defective elimination. Others[32] have pointed out that senile pruritus is often associated with vascular diseases such as hypertension and arteriosclerosis of the skin and brain. The condition is more severe in the winter, most pronounced on the legs, worse at night, and excited by rough clothing. Exposure to heat causes an increase in its severity.[33]

In treating people with senile pruritus, says Palmer, the history must be taken in great detail and adequate laboratory studies should be made. General advice for such patients includes bathing instructions regarding adequate spacing of baths, moderate water temperatures and the limited use of detergents. A variety of simple lubricating oils and creams may be prescribed for softening the skin. In addition, correction of toilet procedures and management of underlying disorders is required. In some cases, the use of non-narcotic sedatives is indicated and often they provide considerable relief.

The use of soothing lotions containing cooling agents, like menthol, and anti-pruritic substances, such as phenol, are often quite helpful. According to Netherton,[34] a soothing lotion can be made with equal parts of glycerine, ethyl alcohol and peppermint water. Either 0.5 per cent of phenol or 0.12 per cent of menthol may be added. Pertinent in this connection is the ob-

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servation[10] that phenol is still the best single antipruritic agent, and menthol and camphor can be useful in treatment. However, careful observation is required to be sure that these agents do not act as sensitizers. In some cases, the antihistaminic agents are also helpful.

Ointments and creams are likewise beneficial in the treatment of senile pruritus. Ormsby[12] states that daily massage with an oxycholesterol-petrolatum ointment base or wool fat is valuable. He also suggests that the following ointment is useful in this condition:

Salicylic acid	**1.33 Gm.**
Phenyl salicylate	**1.33 Gm.**
Methyl salicylate	**2.00 Gm.**
Zinc oxide	**8.00 Gm.**
Wool fat	**16.00 Gm.**
Petrolatum, to make	**60.00 Gm.**

Various other measures may prove useful in the control of senile pruritus. Sex hormones may be employed; testosterone being prescribed for men and estrogens for women.[34] Intravenous calcium gluconate, and supplementary vitamin A and vitamin B complex may be given.[29]

With senile pruritus as an example, it is evident that the treatment of dermatologic conditions of the aging skin requires considerable skill and the use of a number of special preparations. That improved products for such purposes will be forthcoming is apparent, not only in the growing demand for them, but in the research now going on to supply this ever-increasing need.

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The Essential Oils

(Continued from page 188)

gratitude to Mr. Frederick H. Leonhardt, President of Fritzsche Brothers, Inc., whose unfailing confidence

and generosity have made possible the completion of this work."

In addition to his upwards of twenty years of field investigations throughout the essential oil producing regions of the world, completion of the work required ten years of literature research, editing and writing. Says the author in the preface to the final volume:

"Much effort and toil have been expended on a task made difficult not only by the continuing rapid progress of chemistry, but also by the profound economic changes that have taken place recently in the essential-oil industry throughout the world. A work originally planned to comprise no more than three volumes has now grown to six—an enterprise of some magnitude for one private concern to have undertaken, particularly in a time of economic and political uncertainty. Mounting costs of research and publication —most unfortunately for science and technology— may deter any future attempt to publish a comparable work in so relatively limited a field."

Praise has been heaped on Dr. Guenther for this work more in foreign countries than in the country in which it was created. Recently "Soap, Perfumery and Cosmetics" (London), said:

"He has written of essential oils as realities, emerging from a real and vivid background of varied geographic and climatic character . . . . Rarely indeed does one find the recorded facts so aptly and so intimately associated with the rich understanding that is born of experience and the poetic appreciation that comes of imagination . . . . The author's personal investigations have taken him to some of the least accessible parts of the globe, and much of the information that he has published from time to time has been enthusiastically compiled from first-hand knowledge, ably supported by photographs actually taken on the site of operations. In addition to the pioneering spirit, he has also the requisite academic and commercial background to command success."

And W. R. Littlejohn, writing in the "Perfumery & Essential Oil Review said:

"Volume VI completes this monumental work and one marvels that such an undertaking has been completed in so short a time. The very brief time lag between the appearance of the first volume and of the sixth is a real achievement and it ensures that the work is up-to-date and complete in all respects. One can only briefly indicate some of the oils discussed because it can be truthfully said that whichever page in the books is read, something of interest can be found there, both for the industrialist and the technician and that even in dealing with minor oils Dr. Guenther has succeeded in bringing out their points of interest and possible uses. Indeed one of the main features of the books has been the fact that the oils have been considered from an economic and industrial point of view and this side has never been lost sight of in assessing their value. Even in the preface to this volume the author expresses the opinion that in the future the publication of a similar work will have to be under-

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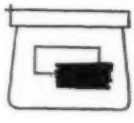

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•

This is Nauseaonalism that should never be mistaken for Patriotism. It is like the censorship movement that is fed by frustrated individuals who seem to hate Jane Russell more for what they lack than what she has.

•

The right of an individual to determine his own likes and dislikes was long counted a basic part of Freedom. Today the conscription of Americans into a uniformity of thinking seems better organized than their drafting into uniforms.

•

It is difficult to believe the writings of Dorothy Parker have insidious meanings that are helpful to Moscow. Even the code-breakers of Central Intelligence would have a tough time squeezing Communist propaganda out of the Parker line: "Men Don't Make Passes At Girls Who Wear Glasses."

•

Censorship has been no more inspiring to art and culture than putting pants on the statues of horses has been to the men's clothing industry. The trouble with individuals and groups who insist on doing our thinking for us seems to be their inability to think for themselves, instead of emotionalizing.

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The Cosmetic Industry, of course, has long opposed Censorship. Except, of course, where creditors sent inquiries to Dun & Bradstreet.

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taken by a foundation financed by the industry. However, now that Dr. Guenther has completed his task it is to be fervently hoped that the volumes will be kept up-to-date by the publication of addenda at intervals and that the industry can repay the author for the service he has given them by ensuring that this is made possible.

"These six volumes are indispensable companions to all in the industry, including the buyer, the sales representative, the flavor chemist, the perfumer, the research chemist and the distiller, so that no stone should be left unturned to look after this valuable encyclopedia of knowledge that Dr. Guenther has devoted so much of his time and labor to gather together . . . . .

"The words excellent and classic have been used so many times in a description of the individual volumes that it seems unnecessary to repeat them here. All that those engaged in the essential-oil industry and the scientific world in general can do is to once again shower their praises on the author for a work which has ensured him a permanent place in the history of science."

The Drug Industry and New England

(Continued from page 185)

pharmaceutical research men have been trained in New England colleges and universities.

A strange situation, however, appears to exist in New England. Pharmaceutical companies, located in the area, have apparently failed to seek out these people and make use of this terrific source of ideas for the potential development of new products.

(e) Management

When one looks at the numerous advantages that New England offers the drug industry the fact that New England has not produced a leading drug company is both surprising and unique. Surveys indicate that the basic reason is probably one of an attitude of conservatism, inherent in this region. Due to this conservative element, New England management cannot seem to bring itself to gamble the expenditures of money necessary to increase sales forces, advertising and promotion, nor to increase research, in order to assure a continuous flow of new products. It is apparently the top management in New England drug companies that has been the cause of this lack of expansion. Although this may appear to be a disadvantage, it is a fact that a good portion of the top men in the industry throughout the country are former New Englanders, and therefore the problem of inducing such men to return does not appear to be too great.

(f) Geograpeical Location

A careful look at the various leading drug manufacturers in the United States reveals that geographical specification was not the reason for the location of these companies. The volume of the drug industry is not concentrated in any specific area in the country. The only resemblance to a concentration is in the

Philadelphia, Trenton and New York area, but when measured by volume of output, it is not too significant. Among the many advantages offered in New England, particularly in small towns are: expansion opportunities from a space standpoint; adequate labor supply; few labor problems; few political entanglements; and quite frequently low taxes.

The transportation of finished products from New England has not been sufficiently costly to exclude the area from a geographical standpoint. In fact it has been found that shipping by water to the West Coast, was, in certain instances, less expensive than shipping by other means.

In recent years many of the large drug operators have been giving increasing thought to the diversification of plant locations because of transportation costs, packaging costs, labor and increases in taxes. Many feel that greater economy can be secured by spotting plants strategically around the country and limiting them in size to a thousand employees or less. New England should be particularly attractive to such economy-minded companies.

(g) Distribution—nearness of markets

Nearness of markets is always of paramount interest to the manufacturer and New England offers this; within a 500-mile radius the heaviest concentration of markets in the country is available. Such nearness to markets allows low-cost distribution through the use of trucking facilities, a relatively inexpensive form of transportation.

Top management should seriously consider the possibility of location in New England in view of the many advantages which exist and the increase in the growth of the industry. Although the advantages, which have been noted, apply specifically to the ethical drug industry, many of these also apply to the proprietary field.

Chlorophyll—In Vivo Vs. In Vitro

(Continued from page 189)

disulphide reaction, and the nature of the products, remain to be determined.

More recent (and so far unpublished) work has shown that one g. of 95 per cent (N.N.R. assay) sodium copper chlorophyllin in one per cent w/v aqueous solution will completely alter 0.2 g. of sodium sulphide (Na_2S) in 24 to 48 hours. If the mixture is acidified at the end of the period, a moistened lead acetate paper suspended in the air space in the vessel shows no discoloration. There is nothing subjective about this delicate test for hydrogen sulphide! This deodorizing reaction is now being further investigated, but it seems likely that part at least of the original sulphur finally appears in the free state.

In comparing results by different workers, it is important to remember that the nature and proportions of the chlorins and rhodins (or their copper derivatives) in a given sample of "water-soluble chlorophyllins,"

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and hence the activity of the latter, may well vary with the method of preparation. Further, such commercial preparations are evidently not free from other naturally derived materials to which the action may be due.

Bearing in mind the role that glutathione and related compounds are believed to play in cell oxidation and reduction processes by virtue of the reversible mercaptan-disulphide mechanism, the fact that water-soluble chlorophyllin preparations appear to accelerate *in vitro* the oxidation of mercaptans may well be very significant in explaining its action *in vivo*. This at any rate is one suggested aspect for physiological research on the action of chlorophyllins.

New Technique of Patch Tests

(*Continued from page 187*)

valid information can be obtained. Not only can the primary irritating and sensitization qualities of an ingredient be determined, but also its skin fatiguing abilities. A true primary irritant will cause harm to the skin during the first application. Fatiguing substances can produce harm to the skin any time after the first application in the first phase of this technique. Therefore, this technique gives us a yardstick to measure the degree of fatiguing ability of an ingredient, depending upon how many applications are necessary for skin reactions to appear. Sensitizing materials may be detected on the forty-eight hour application in the second phase.

This repeated insult technique described above is a combination of two previous techniques, one in guinea pigs and one in humans. In guinea pigs, Draise and his co-workers, developed a repeated insult technique, based on the Landsteiner method. A small quantity of the material to be tested was injected intradermally into a group of guinea pigs every other day for a series of ten to fifteen injections. The reactions, namely, the degree and the diameter of the erythema, were graded twenty-four hours after each injection.

In humans, Schwartz has been the exponent of a two-application technique of patch testing to detect primary irritants and sensitizers. The Schwartz technique also consists of two phases as follows:

Phase I—To detect primary irritation:

1. Application of the substance directly to the skin by means of a patch for a definite period of time.
2. Removal of the substance from the skin and grading the reaction.

Phase II—To detect sensitization:

1. A recuperation period of a definite length of time.
2. Reapplication of the substance to the skin of the same subjects by means of a patch for a definite length of time.
3. Removal of the second application and grading the reaction.

The repeated insult technique presented in this paper by the authors is obviously a combination of Draize's guinea pig technique and Schwartz's human technique.

The advantages of the repeated insult technique are:

1. More closely approximates consumer use, and therefore gives more valid information.

2. Accuracy in detecting skin fatiguing materials is greatly enhanced. If the initial application in the Schwartz technique is of more than two days' duration, it is obvious that any skin reaction may be the result of a daily reaction after the first 24, 48, 72, or 96 hours. Whereas, in the repeated insult test, the reactions are graded after each 24 hour application and true primary irritants, which harm the skin in the first twenty-four hours, are sharply differentiated from fatiguing ingredients which may harm the skin subsequently.

3. The repeated insult technique gives a quantitative means of evaluating the intensity of a fatiguing ingredient. This quantitative evaluation is based upon the number of applications necessary for skin reaction to occur.

The disadvantages of this repeated insult technique are as follows:

1. It takes a longer period of time to complete.

2. More work is required in applying and removing patches.

3. Increased incidence of adhesive tape reaction occurs.

4. Subjects are not allowed to shower for a long period of time.

5. Greater expense is incurred due to increased use of subjects and materials such as adhesive tape, patches, etc., and time.

In the experience of the authors, the advantages far outweigh any disadvantages which have been encountered thus far. With the repeated insult technique, the authors have been able to detect many fatiguing substances which produced no reactions with concurrently run Schwartz patch tests.

Also many substances which were graded as primary irritants after the first application using the Schwartz method produced no reaction after the first three applications using the repeated insult method.

An example of a substance which produced no reactions at all in the Schwartz method was a formulation investigated by the authors. This formulation consisted of a germicidal ingredient in combination with propylene glycol. Using the Schwartz technique, this formulation produced skin reactions, neither after a five-day primary application, nor after a two-day secondary application. Therefore, it was neither a primary irritant nor a sensitizer. However, using the repeated insult technique, reactions to this formulation appeared after the eighth application and the intensity of these reactions increased in some subjects after subsequent applications to the extent that the test had to be discontinued.

Another substance tested in our laboratory, a well-known perfume ingredient in a new formulation, demonstrated the differentiation between a so-called primary irritant and a true primary irritant. This formulation showed up as a primary irritant after a primary applica-

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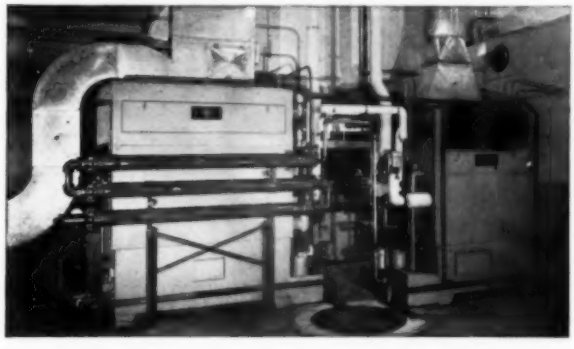

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tion of five days, using the Schwartz technique. However, it produced no reaction in the first two applications of the repeated-insult technique. Also, whereas approximately only 80 of the 200 subjects tested by the Schwartz Method reacted, over 35 of the 50 subjects in the repeated-insult test eventually showed reactions.

Conclusions

In summary, a new method of patch-testing has been developed. This method is a repeated insult technique based upon simulation of use by consumers. The repeated-insult technique can detect fatiguing capabilities of ingredients which are otherwise overlooked by other methods. This new technique also gives a quantitative measure of the fatiguing properties of a substance. It also differentiates between so-called primary irritants and true primary irritants. In brief, we are sure that the repeated-insult technique yields more valid predictive information than the pre-existing patch test methods, and we believe that this information more closely approximates the standards of certainty used in calculating costs and establishing the efficiency of a new product.

Finishing and Freshening Lotions

(Continued from page 183)

unless the amount used is very sparing, the face may feel clammy after application.

In the final analysis it should be remembered that these preparations—in addition to the physical functions they serve—must be able to impart a sensory effect as well. The latter effect is difficult to explain. For example tests could be made to show that a preparation will remove a certain amount of soil from the face—but a feminine user may say that it does not *feel* clean. She cannot readily explain what is meant by "feels clean" but this sensory effect must be contributed to the preparation as well.

Patent Thoughts and Trends

(Continued from page 243)

patents merely reflect in number and quality the research efforts which gave birth to the patents, it seems that the research efforts in the cosmetics field could stand some attention both from the point of view of quantity and quality.

Such an article as this would be incomplete if it failed to note that the cosmetic industry recently has given unmistakable signs that it is awakening to the research facts of life and some elements are doing something about it. The recent growth and strengthening of scientific organizations connected with the industry testify to an enlightened management policy. Also, there are some very complete disclosures noted in recent years in the cosmetic field. Indeed, one of the most complete disclosures recently noted dealt with a patent in the hair waving art. Finally in a recent

presentation address, the publisher of this journal, Frazer V. Sinclair, while giving due credit to advertising, sales, etc., noted that the chief distinguishing factor between the drug and cosmetic fields was the different positions research enjoyed in the past. He noted quite a recent improvement in this regard in the cosmetic industry.

It now rests for the cosmetic industry to live up to its promise.

WHITE SOAP

White soap is not new. However, according to Jackson and Bayer, Procter & Gamble inventors, white soap made from sunflower, linseed and soybean oils is something else. For their process for making white soap from such oils, they were issued U. S. P. 2,646,435.

The stumbling block heretofore in making white soap from the mentioned oils was, according to the inventors, the presence of "color precursors" which are said to be colorless or almost colorless materials in the oil that become highly colored in the soaps.

Jackson and Bayer solved the problem, they say, by hydrogenating the oil, followed by treatment with alkali and alkaline earth chlorites in the presence of sulfuric acid, and then removing the altered precursor by contact with an adsorption medium.

The inventors make no claim of originality for any of the individual steps employed by them.

Example 1, taken from the patent, follows:

A batch of soybean oil that had previously been bleached with 3 per cent of Super Filtrol (an acid activated bleaching earth) was hydrogenated to an I. V. of 65 and filtered through kieselguhr. The Lovibond color of the oil (measured on a 5¼" column) at this stage was 7 yellow and 1.1 red. The oil was divided into two portions as follows:

(1) The first portion was treated with 0.1 per cent sodium chlorite (as a 20 per cent water solution) plus 0.025 per cent of sulfuric acid (as a 20 per cent solution) for 30 minutes at 100° to 110° C. with constant agitation. During this treatment the oil became reddish orange (Lovibond color—5 yellow and 28 red). An amount of calcium carbonate slightly in excess of that required to neutralize the acid was then added with 3 per cent of Super Filtrol to the oil and stirred for one hour at 100° to 110° C. The bleaching earth and calcareous material was then removed from the oil by filtration, the final color of the oil being 9 yellow and 1.7 red. This first portion of the oil was then mixed with an equal weight of a mixture of equal parts of tallow and coconut oil, converted into kettle soap, crutched, framed, cut, and stamped to form cakes or bars by well known methods. These bars were "off-white" in color.

(2) The second untreated portion of the oil was mixed with tallow and coconut oil and converted into soap in the same manner. The resulting bars had a decidedly objectionable brownish pink tint.

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Reflectance or whiteness measurements of the bars gave the following results:

Soap	Whiteness
From treated oil	64.3
From untreated oil	51.5

The relative whiteness was determined by measuring the per cent reflectance of a standard blue light from the soap surface as measured by a Hunter-multipurpose photoelectric reflectometer. This instrument is described in Research Paper 1345 by Richard S. Hunter in the Journal of Research of the National Bureau of Standards, page 581, vol. 25, November 1940.

HAIR COLOR-RINSE CONCENTRATE

M. J. Den Beste has patented a hair-tinting concentrate containing water-soluble dyes in combination with what are termed emollients.

According to the patent, U. S. 2,643,211, the emollients have the formula:

wherein R is alkyl ranging from 1 to 12 carbon atoms, preferably from 6 to 10 carbon atoms of the branched chain type R^1, is a lower alkylene such as methylene, ethylene, propylene, or isopropylene and x is from 1 to 5. P-iso-octyl phenoxy ethanol, p-di-iso amyl phenoxy diethoxy ethanol, di-iso-butylphenoxy ethanol, p-iso-octyl phenoxy tetra ethoxy ethanol, o-iso hexyl phenoxy dimethoxy methanol and p-iso propyl phenoxy isopropanol are said to be exemplary.

The idea is for the emollient to coat the hair, and the dye, being only slightly soluble in the emollient, the rate of penetration therethrough by the dye is controlled, resulting in coloring the hair evenly.

The emollient is used to the extent of 1 to 10 parts by volume in the concentrate, 4 to 6 parts being preferred.

SCENT PROLONGATION

One of the ever-present problems in the perfuming field is to provide a product which gives off an even or the same scent throughout its period of use. The use of so-called fixatives is therefore resorted to, in order to tie-in the evaporation rates of the various ingredients.

R. W. Phillippin has concerned himself with a somewhat different problem, that of making the product give off its scent for a longer period than is normally the case. For his solution he won U. S. 2,643,212.

Phillippin's process applies only to natural essential perfume oils, as distinguished from synthetic oils. Further, to operate in his process the natural oils must contain terpenes and must be present to an extent more than 50 per cent of the starting mixture.

Examples of different combinations which may be

processed by Phillippin's method, as taken from the patent are:

I	cc.
Rose oil	15
Sandalwood	65
Vetiver oil	35
Neroli	15
Jasmine	10
Bergamot	20
Balsam Peru	15
Labdanum	25

II	cc.
Niaouli	30
Nerol	25
Tuberrose	20
Oil of *Convolvulus scoparius*	25
Ylang ylang	35
Yndol	15
Eugenol	45
Verbena	5

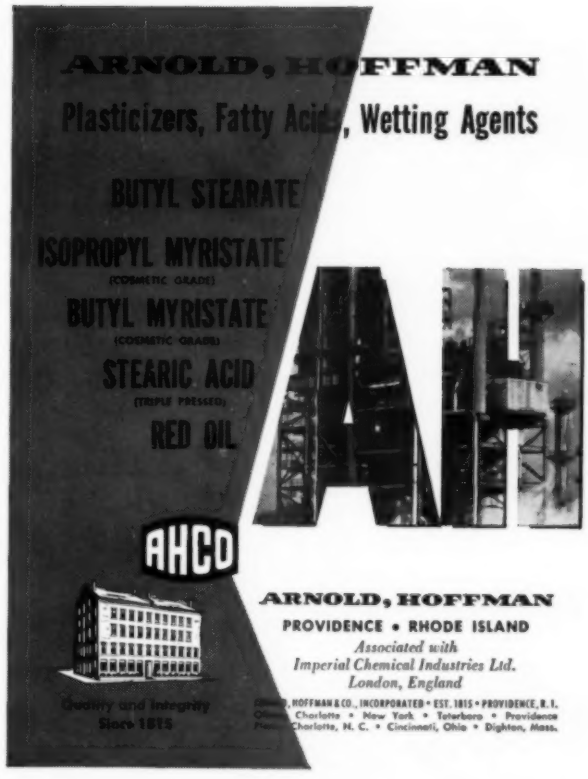
III	cc.
Vetiverol	40
Seringa	20
Sweet almond	25
Rosemary	15
Sage	25
Orange flower	30
Lavender	20
Oil of lemon	25

IV	cc.
Arsarum	15
Myrcia	25
Melissa	15
Geranium	65
Patchouli	25
Heliotrope	10
Cedar wood	30
Acacia	15

V	cc.
Angelica root	35
Thibetolide	25
Cardamon	40
Cajuput	15
Terpinyl acetate	10
Gardina	10
Valerian	5
Terpineol	60

VI	cc.
Santalol	50
Rhodinol	20
Orris root	35
Piperitone	15
Eucalyptus	25

(*Continued on page 272*)



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VI (Continued)

	cc.
Aleppo	20
Safrole	30
Champaca	5

VII

	cc.
Nerolidol	65
Wintergreen	35
Calamus	15
Eugenol	25
Mandarin	10
Boronaia	5
Irisone	15
Oak moss	30

Claim 1, reproduced below, gives a good idea of the process employed by Phillippin:

The process of preparing a scented material having prolonged scent retaining characteristics from a starting material, the essential active ingredients of which consist of a mixture of natural essential perfume oils which contain terpenes, said process comprising the steps of mixing with a volumetric quantity of said starting material from about half to about twice said volumetric quantity of an aliphatic alcohol having from 3 to 5 carbon atoms, fractionally, distilling the mixture so formed to produce as separate distillate fractions: (*a*) an alcohol fraction distilled off at about the boiling point of said aliphatic alcohol, (*b*) a fraction boiling at atmospheric pressure in the range of about 140° C. to about 148° C., (*c*) a fraction boiling at atmospheric pressure in the range of about 195° C. to about 200° C., and (*d*) a fraction boiling at atmospheric pressure at a temperature of about 220° C., and leaving a residue; and subjecting said residue and said fractions (*b*), (*c*) and (*d*) to a saponification action by introducing said residue and said fractions (*b*), (*c*) and (*d*) separately into an alcohol solution of a caustic alkali to produce the desired scented material.

RECENT PATENTS

2,635,102—**S. L. Ruskin—Boron Derivatives of Ascorbic Acid.**

2,635,113—**E. I. du Pont de Nemours—Manufacture of Bis (Alkoxy-Benzamido) Stilbene-Disulfonates.**

2,639,287—**Nepera Chemical Co.—Thiosemicarbazones of Furylketones.**

2,639,288—**Eastman Kodak Co.—Stabilization of Fats and Oils with 2,5-Dihydroxyphenyl Dimethyl Carbinol and Related Antioxidants.**

2,640,007—**Research Corp.—Production of Alkaloids by Clitocybe Subilludens.**

2,640,054—**Heyden Chemical Corp.—Crystallizing Dihydrostreptomycin Sulfate.**

2,640,076—**Luxemia (Belgium) — 1 - Phenyl - 2 (Methyl-Camphosulfonyl) Amino Propanols.**

2,640,083—**Mathieson Chemical Corp.—Manufacture of Vanillin.**

2,640,752—**Ethicon Suture Labs. — Making Sutures.**

2,640,753—**H. B. Morris and C. B. Meuser—Sterilizing Air with Glycol Ethers.**

2,640,778—**W. L. Owen—Enriching Sugar with Vitamins.**

2,640,801—**American Cyanamid Co.—Aureomycin Ointment.**

2,640,827—**Hoffmann-La Roche Inc.—Vitamin B_1 Gentisate.**

2,640,828—**Smith, Kline & French Labs.—N,N-Disubstituted Beta-Haloethylamines.**

2,640,829—**Smith, Kline & French Labs.—Isoquinolyl Heterocyclic Ethers. Local Anesthetics.**

2,640,830—**Ciba Pharmaceutical Products—5-Hydroxy-4:7-Phenanthrolines.**

2,640,835—**Hoffmann-La Roche — Alpha - (2 - Thienyl) Benzylureas Anticonvulsants and Analgesics.**

2,640,838,9—**Merck & Co.—△9(11)-Pregnenes.**

2,640,842—**American Cyanamid Co. — Metal - Aureomycin Complexes.**

2,641,550—**K. G. Dykstra and D. DeFelice—Process for Obtaining Volatile Flavors.**

2,641,563—**McLaughlin Gormley King Co.—Insecticidal and Acaricidal Composition Comprising Propylene Glycol and Alkali Ammonium.**

2,641,567—**Mathieson Chemical Corp.—Producing Penicillins.**

2,641,597-601—**Hoffmann-La Roche Inc.—Furans.**

2,641,599—**Hoffmann-La Roche Inc.—Dibenzolylethylene Compounds.**

2,641,604—**Chattanooga Medicine Co. — Aluminum Salts of Dibasic Amino Acids.**

2,641,610—**May & Baker Ltd.—Quaternary Ammonium Salts.**

2,641,612—**Osterreichische Stickstoffwerke — Vanillic Acid Diethylamide Respiratory and Circulatory Stimulant.**

2,641,617-8—**Merck & Co. Inc.—1,1-Diphenyl-2.2-Dimethyl Propane Derivatives.**

2,642,374—**Sandoz Ltd.—Prepn. of Crystalline Active Principle from Allium Species.**

2,642,375—**Ethicon Suture Labs.—Hemostatic Compn.**

2,642,427—**Abbott Labs.—Piperazine Salts of Cyclopentanopolyhydrophenanthrene-3-Monosulfates.**

2,642,428—**Merk—Quaternary Ammonium Ethyl Thiocarbamates.**

2,642,430—**Monsanto—Hydroxy Substituted Aliphatic Ether Derivatives of Nitrogen Heterocyclics.**

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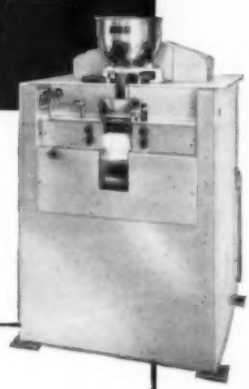

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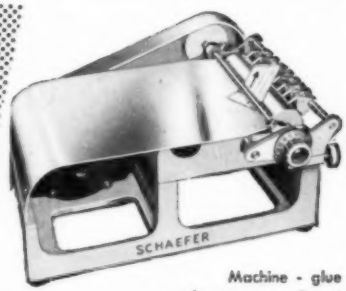

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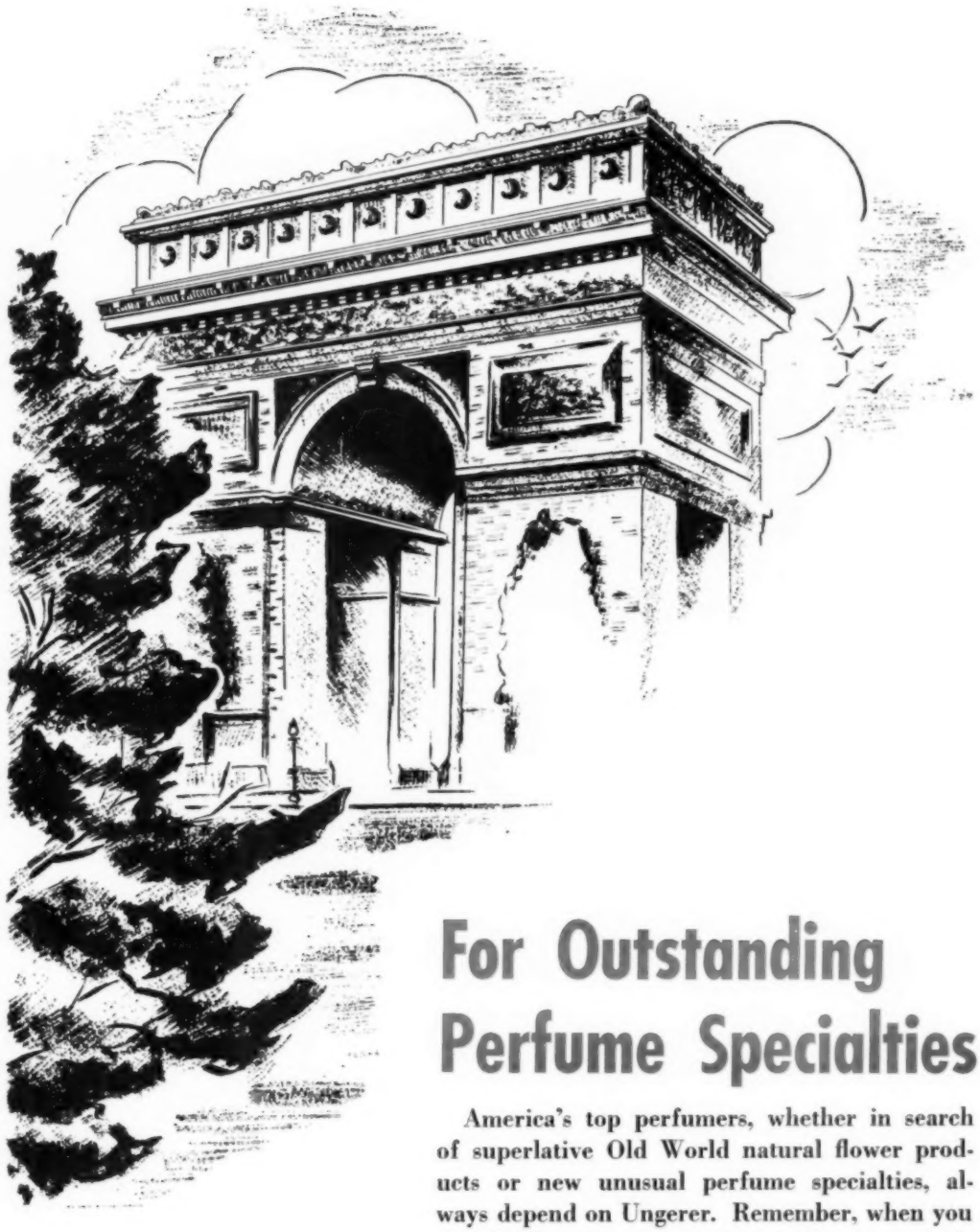

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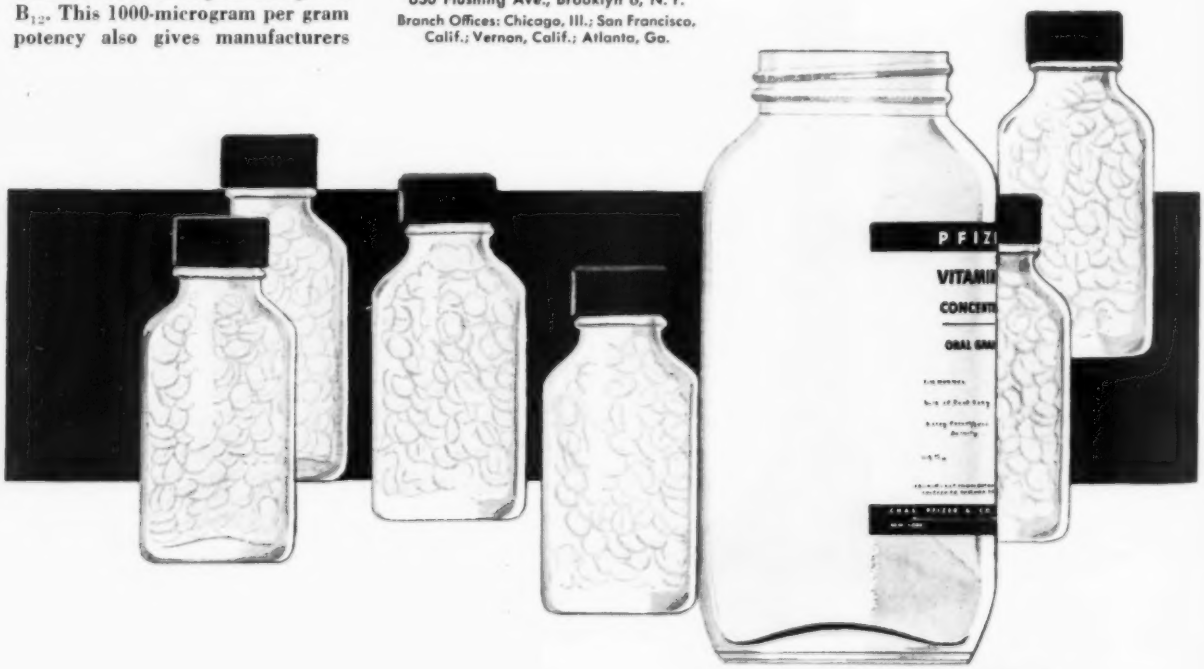

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